

# American Gas *Association* MONTHLY

A.G.A. Sets Up War Committee

•

Air Raid Protection Material

•

Home Service Aids War Effort

•

Surveys Plot Changing Trends

•

A Utility Community Program

*February*



1942

VOLUME XXIV NUMBER 2

## A Wife Confesses . . .



"I'LL ADMIT I didn't know how much more Gas for cooking offers 'til I went to select a new range! But when I realized how clean Gas is—that only Gas gives me instant high heat without waiting—and a flexible heat I can turn to a hundred different degrees—

When I heard how much a modern Gas range could save us on food and fuel bills—When I saw all its wonderful new time- and work-saving features—Then I knew no other range would be so kind to both me and the budget as an automatic Gas range!"

## A Husband Confesses . . .



"FRANKLY I had no idea there was so much to buying a range! But when I learned how much more efficient and economical Gas is as a fuel—How important the dependability of an uninterrupted Gas service is in these uncertain times—When I found that modern Gas ranges

will last for years—won't run into a lot of money for expensive hard-to-get replacements—Whew! I certainly thanked my lucky stars that we got the facts and bought a modern Gas range! And say—is it a beauty—has it improved Anne's cooking? Well—just ask me!"



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**IN THE INTERESTS OF NATIONAL DEFENSE**  
the variety of Gas range models has been reduced, but these models have been selected to bring you the best combination of the most important modern features. If you do not plan to buy a new range now, your present gas range should be adjusted or repaired, if necessary, to render the most efficient service. Consult your Gas Appliance Dealer or Gas Company.  
**AMERICAN GAS ASSOCIATION**

**GAS—**  
**THE WONDER FUEL FOR COOKING**



**LET GAS DO THE BIG JOBS—COOKING • WATER HEATING • REFRIGERATION • HOUSE HEATING**



## CONTENTS FOR FEBRUARY 1942



Highlight of this last month was the appointment of a small executive defense group within the gas industry to act in emergencies and to coordinate the many-pronged defense activities of the Association. This move, following the government's precedent in setting up a streamlined War Production Board, assures prompt and effective action on the gas front. . . . There's been great demand for reprints of Luis Hilt's defense bibliography (July-August issue). Now Mr. Hilt presents a supplement bringing this valuable compilation up-to-date. It's a must for the alert gas man. . . . Hall M. Henry, with the help of replies to a questionnaire, states the case for home service in wartime and it's a most impressive one. The consensus is that now more than ever before, home service is indispensable. . . . Despite chaotic conditions, Edward J. Devlin and other members of the Market and Economic Research Committee believe that market studies should be continued. Mr. Devlin's article gives sound and useful information. . . . Other items of timely and compelling interest: do's and don'ts for handling gas appliances, how to defend your industrial plant, bigger tanks and bigger uses for gas, and new defense transportation set-up.

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Courtesy Consumers Power News

"Silvered Steel"—Photograph of the liquid purifier at the Consumers Power Company's gas plant, Lansing, Mich., which was exhibited at the annual display of the Lansing Camera Club. The photographer was G. G. Granger of the *Lansing State Journal*.





JAMES M. BEALL, *Editor*

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## GEARED FOR WAR

### .... Gas Industry Sets Up Streamlined Committee

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**A**PPPOINTMENT of a seven-man Committee on War Activities to replace the forty-seven-man defense group set-up by the American Gas Association in May, 1940, was announced by President George S. Hawley in January. The new streamlined group, headed by Ernest R. Acker, president, Central Hudson Gas and Electric Corp., Poughkeepsie, N. Y., will henceforth act as an executive emergency action group and coordinating body for all defense material and in all Association activities pertaining to the gas industry's part in the conduct of the war. All Sectional committees of the Association handling specialized matters relating to defense will report to this committee.

In addition to Chairman Acker, the committee consists of Arthur F. Bridge, vice-president, Southern Counties Gas Company, Los Angeles, Calif.; Henry R. Cook, Jr., vice-president, Consolidated Gas Electric Light & Power Company of Baltimore, Md.; J. H. Gill, president, United Gas Corporation, New York, N. Y.; J. French Robinson, president, The East Ohio Gas Company, Cleveland, Ohio, and chairman, A. G. A. Natural Gas Section; Marcy L. Sperry, president, Washington Gas Light Company, Washington, D. C., and George S. Hawley, president, The Bridgeport Gas Light Company, Bridgeport, Conn., and president, American Gas Association, *ex-officio*.

Organization of the Committee on War Activities was made necessary by the entrance of the United States into the war and the need for a small cohesive group representative of the gas industry which could act swiftly and efficiently in time of emergency. The important part the gas industry is now playing in the production of innumerable materials of war combined with its essential role in civilian life and defense, made such a step imperative. The former defense committee served a very useful purpose and accomplished a great deal in preparing the country's gas industry for war-time operation.

As organized in May, 1940, by the Executive Board, the Committee on National Defense, under the chairmanship of George F. Mitchell, president, The Peoples Gas Light and Coke Co., Chicago, Ill., had a four-point program covering: (1) Plans to provide uninterrupted gas service to industry and the public, (2) Measures for the protection of properties and lines, (3) Assistance in production of munitions, and (4) Cooperation from the industry's personnel. These objectives are still high on the agenda of the new committee together with all measures of cooperation which will assure complete and final victory in the war.

Full cooperation with all government bodies is one of the prime objectives of the new committee so that the great resources of the gas industry may be used to fullest advantage in the production of munitions, the maintenance of civilian morale, and the protection of life and property. As stated in previous letters to government officials and reiterated in a letter by President Hawley to President Roosevelt three days after war was declared, the gas industry will do its utmost to cooperate in all respects. President Hawley said:

"The Executive Board of the American Gas Association, meeting December 10, 1941, reaffirms its pledges for full cooperation of the gas utility industry of America with our Government in the national crisis.

"Together with Federal agencies, we have long since distributed information for the protection of our plants, wells, transmission lines, and other facilities. Measures have been adopted for the protection of civilian life and for the assurance of a vital fuel service to the homes and industries of America.

"We are carrying out plans of close cooperation in the program of nutrition in the national defense.

"We are equally ready to join in all necessary protection to the public resulting from air raids and other enemy action, including sabotage, in preparation for which we have issued information based on procedure in other countries at war."

This letter was acknowledged on December 17 with thanks by M. H. McIntyre, secretary to the President.



Ernest R. Acker

The new head of the gas industry's war activities body, Mr. Acker, is a young aggressive leader of Association activities who has had consid-



Marcy L. Sperry



A. F. Bridge



George S. Hawley

erable military experience. During the first World War he served overseas as First Lieutenant in the United States Chemical Warfare Service. A graduate of Cornell University, class of 1917, he attended Harvard University Graduate School of Business Administration. He was elected president of the Central Hudson Gas and Electric Corp., Poughkeepsie, in 1932, succeeding the late Thaddeus R. Beal. Mr. Acker has been treasurer of the American Gas Association since 1938 and is a past president of the Empire State Gas & Electric Association. He also represents the Beal family in the award of the long established and well-known Beal Medal.

As one of the most active groups in the Association on defense activities, the Technical Section has established a working Committee on National Defense under the leadership of Past Sectional Chairman Dorr P. Hartson, vice-president, Equitable Gas Co., Pittsburgh. This committee and all other sectional groups will report to the new Committee on War Activities.

Mr. Hartson's committee consists of

the chairman of the Technical Section, Harold L. Gaidry, gas engineer, New Orleans Public Service Inc., and the following chairmen and vice-chairmen of the Section's committees: R. S. Sheridan, The Brooklyn Union Gas Company; T. L. Robey, Washington Gas Light Company; C. S. Goldsmith, The Brooklyn Union Gas Company; H. B. Andersen, The Philadelphia Gas Works Company; H. D. Lehman, The Philadelphia Gas Works Company; E. W. Guernsey, Consolidated Gas Electric Light & Power Co. of Baltimore; R. H. Arndt, Consolidated Gas Electric Light & Power Co. of Baltimore; and E. W. Zimmerman, Eastern Gas & Fuel Associates, Everett, Mass.

program of action and to discuss recommended procedure in cases of emergency.

The Association has already collected



J. French Robinson



J. H. Gill



Henry R. Cook, Jr.

a large amount of information on Air Raid Precautions much of which was covered in the bibliography in the July-August issue of the A. G. A. MONTHLY. A supplementary bibliography, prepared by the Association's librarian, Luis Hilt, is included elsewhere in this issue. The Technical Section is continuing its analysis of all available literature relating to experiences under blackout conditions, air raid attacks and other wartime situations in Europe, and hopes to see this information issued to the gas industry with suggestions as to the best practice to be followed in this country.

While the Natural Gas Section has no specific committee dealing directly with national defense problems, its chairman, J. French Robinson, is a member of the new committee, and its activities will be worked out in full harmony with that body. To date, defense activities have been handled by established committees of the Section. These have included full cooperation with the Office of Production Management and the Office of Petroleum Coordinator for National Defense. T. R.

The following additional personnel have been added to this committee for specialist purposes: S. J. Beale, West Gas Improvement Co., New York, N. Y.; F. B. Cadmus, Consolidated Edison Co. of New York, Inc.; L. E. Knowlton, Providence Gas Co., Providence, R. I.; and Otto Reiner, Public Service Electric & Gas Co., Newark, N. J. This committee met January 26 in New York to map out an extensive

Weymouth, a past chairman of the Section, is chief consultant to the Natural Gas Section of the O.P.C. A list of district committees set up by this organization is published in this issue of the MONTHLY.

#### Cooperation in Nutrition Program

The Residential Section is making every effort to be of service in the emergency, particularly in cooperating with the national nutrition program to improve the health of the nation. The Home Service Committee early in 1941 published a bulletin entitled "Home Service in the Gas Industry Cooperates in National Defense," which was widely distributed. Since then a survey of all types of community contacts along nutrition lines has been completed and a second bulletin "Home Service Volunteers" has just been released. A subcommittee under Hall M. Henry, Negea Service Corp., Cambridge, Mass., dealing with adaptation of the home service program to national defense, has made a special study of this subject and presents its first report in this issue. Another subcommittee, headed by Beatrice Wagner, The Philadelphia Gas Works Company, is preparing a booklet outlining the care and use of gas equipment, which is expected to be of special interest in conserving vital materials and supplies. A Special Committee of the Residential Section on Nutrition headed by C. C. Young, The Gas Service Company, Kansas City, has proposed further cooperation of the industry in promoting the National Nutrition Program.

#### Gas in War Factories

Tremendous expansion of war production industries has resulted in greatly increased use of gas in factories and commercial establishments and has placed new emphasis on activities of the Industrial and Commercial Gas Section. All committees of this Section are directing their work to be of greatest help in winning the war and will cooperate in all assignments of the newly organized War Activities committee. A special Committee on the Use of Gas in National Defense under the chairmanship of Charles C. Krause, Consolidated Gas Electric Light & Power Co. of Baltimore, has broadened the scope of its activity and will pre-

sent an informative report on this subject shortly. The Industrial Sales Conference to be held in March in Pittsburgh is being arranged so that the maximum amount of material for immediate use in industrial plants will be secured by those in attendance.

The Accounting Section is facing a host of new problems resulting from plant expansion and war activities of all kinds. While this Section has no particular defense set-up, the scope of its regular activities is being enlarged to deal with all problems related to the war. Its officers have announced their intention of rendering all possible service to the gas industry's defense organization.

A large part of the A. G. A. Testing Laboratories work since war began has been concerned with special equipment and changes resulting from the national emergency. Confronted with the need for employing substitutes in place of materials normally employed in the construction of gas appliances, it has been the concern of the Laboratories that safety regulations of existing American Standards be fully met. These and other problems which were outlined in R. M. Conner's article, "Our Laboratories Contribution to War Efforts," in the January MONTHLY, will be dealt with in cooperation with the new committee.

The Association's Washington office under the direction of George

Bean will continue to render service of utmost value in connection with priorities and government defense agencies.

In short, the work of all Sections of the American Gas Association is being geared to wartime activity and will be coordinated and directed by the new Committee on War Activities.

#### A. G. A. Salvage Program

As an additional defense activity, the Association has offered its facilities and cooperation to the industrial salvage section of the government which is charged with the responsibility of developing salvage programs for waste materials, particularly iron and steel scrap, nonferrous metals, paper and rubber. The Association recommends that each gas company charge a responsible individual with the duty of surveying all bulk material not now in use nor at present needed, and of selling and delivering it to the nearest junk dealer at the earliest possible moment.

In another phase of industrial salvage which cannot be handled by government officials, namely, the exchange or sale of machinery and equipment unusable locally, the Association will act as a clearing house for its members by putting material or equipment unneeded by one utility into service elsewhere in the industry.




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With modern high speed gas equipment you have instantaneous, uniform heat under perfect control. Reach a better production tempo on Vancouver's war contracts. Heating equipment is the bottle neck in your plant. Have a talk with B. C. Electric gas engineers. Call Pacific 1212.

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Firepower to Forge the Empire's War Machines



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**Gas**  
THE EMPIRE FUEL

Firepower to Forge the Empire's War Machines

*Small-space advertisements of the British Columbia Electric Power & Gas Company, Vancouver, which highlight the story of gas in war industries*

# Supplement to Bibliography on National Defense and Air Raid Precautions for Public Utilities

Compiled by LUIS HILT, Librarian, American Gas Association

## Air Raid Precautions

The first part of this bibliography was published in the July-August 1941 issue of the AMERICAN GAS ASSOCIATION MONTHLY, pages 283-6.

Items indicated by a † are references available at A. G. A. Headquarters, 420 Lexington Ave., N. Y., which may be copied at cost—25¢ per photostatic page. Items selected as having specific application, as contrasted with those of a more general nature, have been marked with an \*.

The following journal titles are those of British publications: *BCGA Gas Bulletin*, *Chemistry and Industry*, *Economist*, *Electrical Review*, *Electrician*, *Engineer*, *Engineering*, *Gas Journal*, *Gas Times*, *Gas World*, *Institution of Gas Engineers Transactions*, *Journal of the Institution of Heating & Ventilating Engineers*, *Thousand and One Uses for Gas*.

### GAS INDUSTRY REFERENCES

†\*Action in emergency (Editorial re turning off gas at meter)—*Gas Journal*, February 5, 1941: 240.

†A.R.P.; a job for the gas industry—*Thousand & One Uses for Gas*, No. 308-9, Vol. 27—BCGA—1939—20 pp.

†\*A.R.P. applied to gas boosters (Incl. diagram of safety cut-off switch)—*Gas Times*, November 29, 1941: 29.

†\*Air raid precautions for gas undertakings—Roy J. Bennie—*National Gas Bulletin* (Australia), July 1941: 10-14; Same. *American Gas Journal*, January 1942: 25-30.

†Arc welding vs. bombs (Letter to editor)—*Gas World*, June 28, 1941: 322.

†\*Brooklyn Union plans for defense—C. E. Paige; The plan—G. F. B. Owens; Employee defense corps—W. H. Weber; Protecting the gas works—C. E. Cheeseman; Emergency methods of closing breaks in mains—C. S. Goldsmith; Protecting offices and personnel—J. F. Miller—*Gas Age*, November 20, 1941: 17-28; Same. *American Gas Journal*, November 1941: 25-8, 31-2; Same. *cond. American Gas Association Monthly*, November 1941: 378-80 and 411.

†\*Building protection for New York City in case of aerial bombardment—C. W. Cambell—*American Gas Journal*, October 1941: 39-43.

†Camouflage criticisms (Editorial)—*Gas Journal*, November 20, 1940: 328.

†\*Development of air-defense fittings for repairing broken cast-iron mains—Dresser Mfg. Co.—*American Gas Journal*, November 1941: 33-5; Excerpts. *Gas*, December 1941: 25-6.

†\*Emergency air raid equipment—Mary Ann Royal—*American Gas Journal*, January 1942: 41.

†\*England, its civilian protection and gas utility operations in war time—Davis M. DeBard—*American Gas Association*

*Proceedings* 1941; Same. *American Gas Journal*, November 1941: 22-4; *Gas Age*, November 6, 1941: 48, 52-4.

†\*Gas at war—*Gas*, January 1942: 15-19.

†\*How London's gas men defeat raiders (Personal narrative)—*Gas Age*, November 20, 1941: 32-3.

†\*London gas center—*Gas*, December 1941: 24.

†\*Modern methods of patching gas-holders—Mooi Hei—*Gas World*, October 11, 1941: 158-9; L. Bott (Letter to editor)—*ibid.*, October 18, 1941: 173; H. H. Hollis—*ibid.*, October 25, 1941: 180-1 and 184.

†\*National defense and the gas industry—S. J. Beale—*American Gas Journal*, January 1942: 12-16, 42-4; Same *cond. Gas Age*, December 18, 1941: 19-23 and 39 (Incl. references).

†\*O.C.D. adopts A. G. A. recommendations for air raid protection—*American Gas Association Monthly*, January 1942: 8; Same. *Gas Age*, January 1, 1942: 13.

†\*Patching of gasholders and purifiers—W. R. Garrett—*Gas World*, August 23, 1941: 81-2.

†\*Portland Gas & Coke Company issues a defense message—*American Gas Journal*, January 1942: 23; Same. *Gas Age*, January 15, 1942: 52.

†\*Preparedness (Editorial. Includes description of gas street light blackout shield)—*American Gas Journal*, January 1942: 7-8.

†\*Technical men take steps to meet problems of expanding industry and plant protection (Includes excerpts from address by F. M. Roessing)—*American Gas Association Monthly*, November 1941: 408-11 (Illustr'd).

†\*Technical Section (A. G. A.) geared to war needs—H. L. Gaidry—*Gas Age*, January 15, 1942: 45-6.

### BRITISH OFFICIAL PUBLICATIONS

Publ. His Majesty's Stationery Office, London, and available at The British Library of Information, 30 Rockefeller Plaza, N. Y., N. Y.

Note: Since printing of list in Bibliography of July-August 1941, a number of new publications have appeared while others have been revised and brought up to date. A selected list of these may be obtained by writing to the British Library of Information.

### GENERAL REFERENCES

Air attack vs. steel structures—O. Bondy—*Iron Age*, August 14, 1941: 42-5.

†Air raid precautions (Expert advice on blackouts, fire-protection and construction of safe shelters for the home)—*House & Garden*, 2nd Sec., February 1942: 17-24, 35 (Illustr'd).

†\*Blackout preparations in the United States—H. E. Millson—*News Edition* (A.C.S.), November 25, 1941: 1266, 1268, 1270, 1272.

†\*Chemical extinguishers for incendiary bombs (Use of soda-acid extinguishers)—Arthur B. Guise—*Natl. Fire Prot. Assn. Quarterly*, October 1941: 137-8.

†\*Civilian defense reference number—*Architectural Forum*, January 1942—\$1.00 (Excellent material on Blackout, Camouflage, Building Protection, Air Raid Shelters, Civilian Defense Buildings; bibliography, illustrations and diagrams).

†Civil defense; compilation of articles written by Col. Joseph A. Baer, U. S. A.—*Civil Defense Office*, Headquarters Second Corps Area, Governors Island, N. Y., August 15, 1941—27 pp. (Charts).

†\*Classified sources of defense blackout devices—*Elec. World*, January 10, 1942: 50-3.

†Conditioning bombproof underground spaces for shelters and factories—E. Ledoux—*Chem. & Met. Eng.*, June 1941: 82-4 and 87.

†\*Defense for the utilities—A. Barnes—*Pub. Util. Fort.*, July 3, 1941: 23-6 (Legislation to provide penalties for sabotage).

†\*Employee organization for fire safety (booklet)—*Publ. Natl. Fire Protection Assn.*, Boston, 1942—47 pp.—25¢.

Factors in aerial bombardment protection—H. E. Wessman and W. A. Rose—*Eng. News Rec.*, August 28, 1941: 300-4 (Il. diagrams).

†Fire fighters of London in action (book)—by an auxiliary fireman of the



London fire brigade—Publ. Garden City Publ. Co., Inc., Garden City, N. Y., 1941—49 pp. \$25.

†German air raid defense of factories—Curt Wachtel—Chem. & Met. Eng., April 1941: 92-4.

†Here's how to defend the industrial plant—Power, January 1942: 72-3; Same. American Gas Association Monthly, February 1942 (Condensed from "Protection of industrial plants and public buildings"—O. C. D., Washington, D. C.).

†Home blackout procedure demonstrated by utility (Buffalo Niagara Elec. Corp.)—Elec. World, January 10, 1942: 59-60.

†Humidity control in underground bomb-proof spaces—E. Ledoux—Heat. Pip. & Air Cond., January 1942: 6-8.

†If the blackout comes—S. G. Hibben—Elec. Eng., August 1941: 389-92.

Lighting to stop sabotage—D. H. Tuck—Factory Mgt. & Maintenance, November 1941: 95-6.

†Load rise and fall rates in coast blackout (Pacific Gas & Elec. Co.)—Elec. World, January 17, 1942: 12-13.

London letter on buildings under bombing—O. Bondy—Eng. News. Rec., August 14, 1941: 214-15.

†Note on power supply in warring countries—H. S. Bennion—Ed. Elec. Inst. Bul., October 1941: 405-6.

†Plant camouflage—Bus. Week, September 27, 1941: 53-4.

†Power plants vs. air raids—Elec. World, January 10, 1942: 38.

†Practical aids to defense—Power, September 1941: 115-26, 128, 130, 132, 134, 136, 138, 140, 142, 144.

†Protecting industrial plants from magnesium fires—A. B. Guise—Chem. & Met. Eng., June 1941: 85-7.

Protection of utility services in wartime in Britain—W. H. Wood & C. J. Pulham—Amer. Water Works Assn. Jrl., August 1941: 1440-7.

†Ventilation of air-raid shelters—C. Gibson—Jr. Inst. Heat. & Vent. Engrs., April 1941; Discussion. August 1941: 157-62.

†War effect on English electric service—Eric Hardy—Elec. World, January 10, 1942: 55 (Short item).

#### U. S. OFFICE OF CIVILIAN DEFENSE PUBLICATIONS

Note: According to latest information received at A. G. A. Headquarters, the following publications may be obtained by writing to the Superintendent of Documents, Government Printing Office, Washington, D. C.

#### Planning Guides (for distribution to staff executives and appropriate committees).

From two to fifteen copies will usually be sufficient for a local defense council and quantities ordered for printing are estimated with a view to such limited distribution. Planning guides are uniformly 8" x 10½".

1. Citizens Defense Corps; its organization and training—10¢.

2. Atlas of civilian protection Jan. 1942—10¢.

3. Emergency medical bulletin No. 1—10¢.

4. Emergency medical bulletin No. 2—Dec. 1941—10¢.

- †5. Protection of industrial plants and public buildings—10¢.

6. Citizens Defense Corps; insignia and paraphernalia—Dec. 1941—10¢.

- †7. Blackouts (Prepared by the War Department)—August 1941—60 pp.—25¢.

8. Air raid warning system—10¢.

#### Memoranda (for use of technical personnel).

To provide engineers and executives with current data on new devices or schemes, memoranda are issued as material is available. Usually not more than five or ten copies are needed for a local defense council. The size of memoranda is 8" x 10½".

1. Municipal signaling systems—10¢.
2. Bomb tests on materials and structures—Dec. 1941—10¢.

#### Text Books (for technical personnel and instructors).

This series of publications, 6 x 9 inches in size, is intended for the use of instructors and enrolled volunteers while training. It is not intended that students retain their copies.

1. Protection against gas—Dec. 1941—10¢.
2. Fire protection—Jan. 1942—10¢.
3. Glass and glass substitutes—Dec. 1941—10¢.
4. First aid in the prevention and treatment of chemical casualties—Jan. 1942—25¢.
5. Protective concealment—Jan. 1942—10¢.
6. Simple shelters (expanded to four items and in preparation by War Department.)—10¢.

#### Lectures (for instructors).

From talks given before classes at the Civilian Defense Schools and stenotyped, the best material has been selected, edited and reproduced on loose-leaf 6" x 9" sheets in large type suitable for the lecturer. No more than two sets per local training school should be required. Lectures should not be ordered for distribution to the students.

1. General subjects group—Dec. 1941—10¢.
2. Incendiary defense group—Dec. 1941—10¢.
3. Gas defense group—Dec. 1941—10¢.

#### Training Guides (for instructors).

These publications outline the group-training plan in detail and are for the use of the school staff in laying out courses, arranging for qualified instructors and selecting texts. Five to ten copies

of each should serve the needs of the local defense council. They are 8" x 10½" in size.

1. The five course school—Dec. 1941—10¢.
2. Training guide for air raid wardens—Dec. 1941—10¢.
3. Training guide for auxiliary police—Jan. 1942—10¢.
4. Training guide for auxiliary firemen—Jan. 1942—10¢.
5. Training guide for emergency drivers—Jan. 1942—10¢.
6. Training guide for fire watchers—Dec. 1941—10¢.
7. Training guide for messengers—Dec. 1941—10¢.
8. Training guide for bomb squads—10¢.
9. Training guide for rescue squads—10¢.
10. Training guide for nurses aides—10¢.
11. Training guide for advanced first aid instruction—10¢.
12. Training guide for demolition and clearance, and road repair crews—Jan. 1942—10¢.
13. Training guide for decontamination squads—Dec. 1941—10¢.
14. Guide to staff training—Dec. 1941—10¢.
15. Test exercises for the Citizens Defense Corps—Jan. 1942—10¢.
16. Inspections and drills—Jan. 1942—10¢.

#### Handbooks (for individual issue to enrolled volunteers).

This series of publications, 4½ x 7½ inches in size, is designed for the use of the individual enrolled worker. Each volunteer will require a handbook, but it is not necessary to provide other publications for his use. Each local defense council should requisition sufficient handbooks for the volunteers in each enrolled group plus a 20 percent reserve for replacement. Quantities needed should be carefully computed.

1. Handbook for air raid wardens—10¢.
2. Handbook for auxiliary firemen—Dec. 1941—10¢.
3. Handbook for auxiliary police—Jan. 1942—10¢.
4. Handbook of first aid—Dec. 1941—10¢.
5. Handbook for rescue squads—Dec. 1941—10¢.
6. Handbook for decontamination squads—Jan. 1942—10¢.
7. Handbook for emergency feeding and housing workers—Jan. 1942—10¢.
8. Handbook for messengers—Dec. 1941—10¢.
9. Handbook for emergency drivers—Jan. 1942—10¢.
10. Handbook for bomb squads—10¢.
11. Handbook for fire watchers—Dec. 1941—10¢.

#### Volunteer Office Manual (for officials and members of organizing groups)—10¢.



# How to Defend . . . *an Industrial Plant* *and Protect It from Enemy Air Raids*

*As a first step in planning the "inside" defense of American industry, the Office of Civilian Defense, Washington, D. C., has issued a number of instruction pamphlets, listed in the Bibliography on the preceding page, which give recommended procedure for the protection of life and property. Among these is the booklet, "Protection of Industrial Plants and Public Buildings," here presented as condensed in the January issue of Power magazine. While this document stresses air-raid precautions, the plant organization outlined is a good insurance against all explosions, fires and other physical disasters, regardless of origin.*

**T**HE Protective Organization in each industrial plant, business establishment, or public building should consist of a Plant Defense Coordinator and four heads of divisions: Fire, Police, Medical, and Maintenance.

The Plant Defense Coordinator is responsible for developing a communication system within the plant to permit the immediate transmission of messages between the Coordinator and squads organized under the various divisions, and between squads. The report center under the Coordinator should have a system of reports from each squad and from each key position so that he will know when his plant is "manned and ready."

## Plant Defense Coordination

All transportation equipment should be allotted by and under the control of the headquarters of the Plant Defense Coordinator. He should be a clear-thinking individual capable of taking charge of action in an emergency. He has full responsibility for preparing plans, organizing and equipping squads, and training personnel. During an emergency he has control of the dispatch of all squads.

Squads should be organized within each division. The training of personnel should provide first for the training of individuals, then of squads. Thereafter, the entire organization should be trained collectively to insure the fullest degree of

teamwork, cooperation, and usefulness.

The Plant Fire Chief should be the head of the fire-fighting forces. He will be responsible for the fire-fighting brigade and for the equipment, both stationary and portable, permanent and temporary. An inspection and survey should be made immediately and all precautions taken, such as the removal of old equipment and rubbish from roof spaces. Access to the roof should be provided. The adequacy and availability of water supply, both main and auxiliary, should be studied. All men assigned to the fire brigade should be taught the latest methods

of fighting fires and dealing with incendiary bombs.

Fire-watcher squads should be organized, equipped, and trained. Their duties will be to watch for, locate, and handle incendiary bombs so as to prevent a small flame from becoming a conflagration. Normally, fire-watcher squads will handle incendiaries, but they should be prepared to call for assistance.

Rescue squads of specialists, such as engineers, carpenters, bricklayers, welders, shorers and electricians, should be organized, equipped, and trained to rescue people from damaged buildings. Their duties may be extended to include emergency handling of utility services.

A competent fire organization consists of:

1. A main observation post, with such additional observation posts as may be necessary.
2. Protected elevated fire-watcher posts, with necessary men, equip-

## Typical Equipment

### Fire-Watcher Station (4 Men)

- 1 pair of leather or asbestos gauntlets for each watcher
- 1 pair of dark safety-glass goggles for each watcher
- 1 steel helmet for each watcher
- 1 all-purpose gas mask for each watcher
- 4 water buckets
- 1 sand bucket with 3 or 4 in. layer of sand in bottom for use in removal of incendiary bombs
- 1 portable water pump
- 1 long-handled, flat, square-nosed shovel
- 1 fire axe
- 2 bags, each filled with about 10 pounds of sand
- 2 electric lanterns
- 2 one-pound sealed packages of copper-sulphate to be dissolved in water (1 pound of copper sulphate per bucket) for use on phosphorous
- 3 blankets and large safety pins

- 1 crowbar
- 100 feet of 1/2-in. line
- 3 corrugated iron sheets

### Duties of Squad

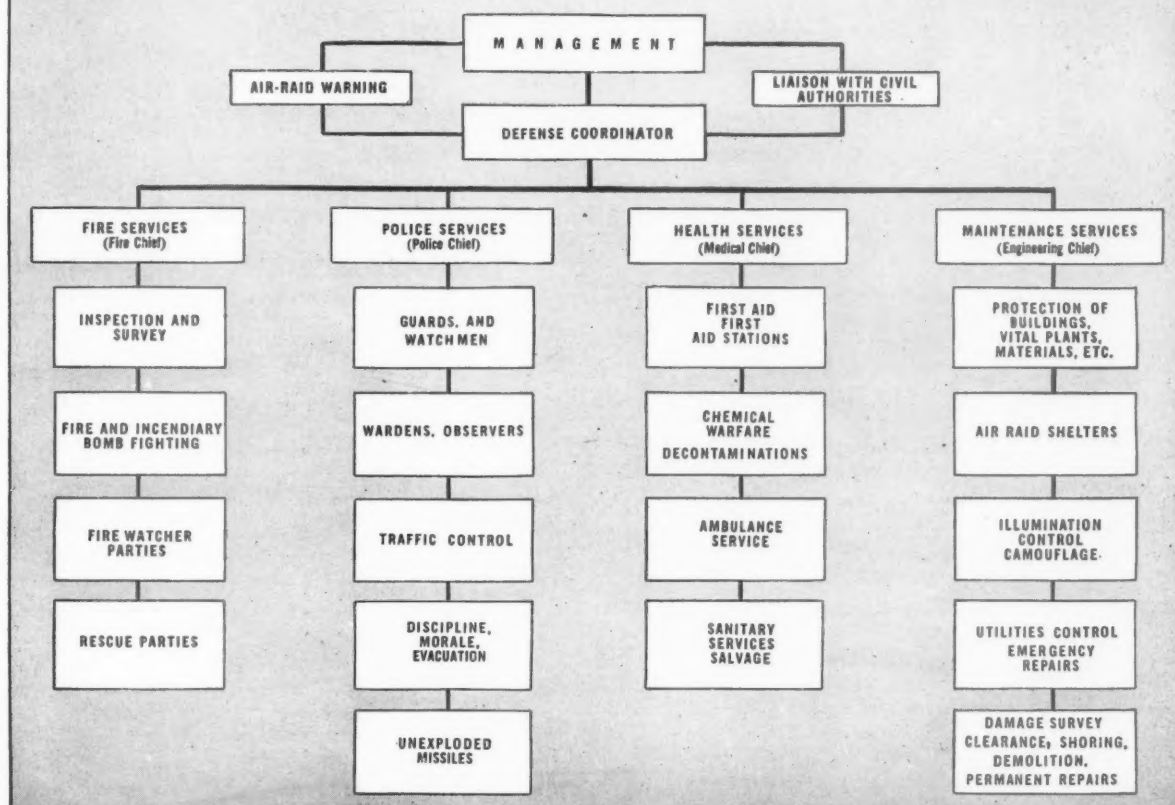
- Member No. 1 Direct and handle nozzle
- Member No. 2 Operate portable pump
- Member No. 3 Refill water buckets
- Member No. 4 Assist and act as runner

### Utility Control Squad (4 or 5 Men)

- 1 helmet each
- 1 all-purpose gas mask each
- 3 or 4 electric lanterns with spare bulb and battery for each
- 1 truck with driver
- 1 bound map of utility service showing layout of distribution systems, location of valves, switches, etc.
- Proper tools, supplies and equipment for efficient execution of assigned duties

(Note:—All of the above should be kept available on the truck)

# INDUSTRIAL PLANT AND BUILDING PROTECTION ORGANIZATION CHART



ment, and independent water supply.

3. Fire posts conveniently situated, but dispersed and decentralized.

4. Adequate main and auxiliary water-supply systems.

5. Fire squads organized and ready to deal with incendiary and high-explosive bombs and fires.

6. A direct communication system between fire-watcher posts, fire squads, and the headquarters of the Fire Chief.

The Plant Police Chief should be in charge of all police activities, the work of air-raid wardens and aircraft observers, training in gas defense and the wearing of protective devices. He should have general responsibility for maintenance of discipline and for development of morale.

The Police Chief should supervise all guards and watchmen, should be responsible for all persons entering the plant area, and should be charged with safeguarding the plant and its material from subversive activities as well as from theft. He should con-

trol all traffic and maintain a clear route to permit the necessary automobiles, rescue trucks, etc. to reach the scene of an incident.

Under the Plant Police Chief, there should be a Senior Air Raid Warden in charge of all wardens and observers.

The observers should be placed on the top of a substantially constructed building in order to command as extensive a view as possible of the surrounding buildings and areas. They will report the approach of planes, bombs dropping, fires, or anything unusual of which the Senior Warden should be informed.

The wardens will be prepared to handle the evacuation of employees from the plants to air-raid shelters. The wardens will make certain that all lights are extinguished during a blackout except those permitted to remain lighted for safety or other reasons.

The Plant Medical Services should be under the plant physician or a practicing physician. In addition to his regular training, the Plant Medical Chief should be qualified to handle poison-gas cases.

The maintenance services should be under the Engineering Chief, who should be a competent all-around engineer, qualified to act in a cool manner in all emergencies. He should have as his assistants the technicians who deal with plant utilities—electricity, steam, gas, water. Skilled workers, such as plumbers, pipe-fitters, machinists, welders, etc., should be detailed to key positions ready to do whatever is necessary.

The first step should be to survey the plant and make the necessary preparations for the protection of all buildings.

Air-raid shelters should be prepared for protection from both gas and

(Continued on page 79)

# Home Service . . . in Wartime

## Can Render Invaluable Aid to Nation



Hall M. Henry

THE gas industry is whole-heartedly in favor of continuing active Home Service Departments during the war. This conclusion is based on a summary of a Home Service question-

naire sent to gas company members of the American Gas Association. This action was also confirmed recently at a meeting of managers of some forty-six gas companies in the New England states where the question—"Do you intend to keep your Home Service Department functioning when you no longer have appliances to sell?" brought a 100% showing of hands.

Another question put to this same New England manager group, namely—"Do you think Home Service contacts and other related activities increase the use of gas where no appliance is sold?" brought to light that some thirteen gas companies or 30% had definite ideas that they do whereas only some two or three thought not. The other company managers present voted neither No or Yes, probably because they had not studied the question.

### Reasons for Continuing Home Service

R. E. Bolte, manager, new business department, The Brooklyn Union Gas Company, wrote:

"My feeling with regard to 'Home Service in the Emergency' (it was emergency then but now it is war) is that the value of Home Service to the industry can be greater than ever before. I believe that there is an unprecedented demand on the part of our customers for nutritional informa-

By HALL M. HENRY

*Assistant to President, New England Gas & Electric Association, Cambridge, Mass.*

tion and for aid in planning wholesome, attractive meals that are geared to economy in the face of rising food costs. Efforts of our Home Service Division will be directed toward meeting this demand.\*

M. M. Walsh, merchandising manager, The Connecticut Light and Power Company, states:

"We are firmly convinced that the Home Service activities will continue to play an important part in our sales development program regardless of the amount of merchandise available to sell. Our Home Service representatives are in an excellent position to make contact with our customers and the expense of this program can be justified by their making frequent contacts with customers to secure a fuller use of present equipment."

L. H. Holmes, commercial manager, The Dayton Power and Light Company, writes:

"Home Service in the emergency might indeed be rearranged, both in thought and fact. Proper and additional usage of present equipment is one way of increasing the use of gas either during the emergency or after, when new appliances will not be immediately available to all who will need them."

B. J. Bean, sales manager, Worcester Gas Light Company, writes:

"Home Service can be of invaluable assistance in putting back in service little used or non-used gas equipment. Further, the home-makers are canning and preserving today more than they have in the past few years and are in a most receptive mood to learn simple methods of bread making."

J. H. Warden, general sales man-

ager, Oklahoma Natural Gas Company, states:

"I believe our problem during the 'emergency' when new appliances are going to be scarce is to keep people sold on the idea that gas as a fuel, even though used with old appliances, is the best. There is no doubt this can best be done by our home service organizations."

John T. Powers, sales manager, Taunton Gas Light Company, says:

"Due to the fact that there will be fewer home calls on new appliances we feel that this is going to give us an opportunity to attempt something that the writer feels has been more or less neglected in this business. We think there is considerable work to be done by a Home Service Department, not only to maintain and increase our present domestic load but to create a desire for more modern equipment. We feel that an effort should be made to help our customers get along and do good work on their present equipment, thereby creating a great amount of goodwill."

### More Work Than Ever

Miss Gladys B. Price, home service supervisor, Southern California Gas Company, writes:

"It is my own personal opinion that during this lull in merchandising activities gas companies should seize every opportunity to increase goodwill and perfect their service to the customer by whatever means has been found to be tried and true. Some of our best work has been done with schools, with women's clubs, P. T. A.'s and Girl Scouts. Many girls who are now in high school will, when this emergency is over, be establishing homes of their own and it seems most important that they have a definite acceptance of gas. Frankly, I feel that Home Service has more work to do than ever before."

\* See page 67 for details of Brooklyn Union plan.

These and other replies show that the gas industry is alive to its opportunities and is counting on Home Service to accomplish one or all of the following objectives:

- (1) To assist in building up the health of the Nation.
- (2) Build goodwill.
- (3) Increase the use of gas.
- (4) Help maintain existing gas loads.
- (5) Educate customers on the value of modern gas appliances.
- (6) Keep management informed as to the shortcomings of its service—whether due to the gas or appliances.
- (7) Keep management posted on changes in living habits of its customers.

They expect to accomplish these objectives through:

- (1) Helping customers with their nutrition problems.
- (2) Helping customers to find substitutes for expensive foods.
- (3) Helping customers get along and do good work with existing equipment.
- (4) Educating customers in care of their gas equipment.
- (5) Pointing out value and importance of hot water to health and beauty.
- (6) Getting customers to put back into service little used or non-used appliances.

### How Will These Functions Be Carried Out?

In general the companies are planning to carry out the above outlined functions, as follows:

- (1) *Through cooking classes*, with the programs designed to feature nutrition, showing proper selection of food, storage, preparation and cooking of food to preserve and protect vitamins and minerals, economy purchasing, hot water for health and beauty.
- (a) Large cooking classes will be held to get over quickly the broad principles of the nutrition program and *importance* of correct cookery in retaining the vitamins and minerals.
- (b) Through church and club groups.
- (c) Through salesmen classes.
- (d) Employee classes in general.

*At right is rough layout showing idea for hand-out material developed for some New England gas companies. Designed to fold on the broken line, with a cover page at top, center fold in the middle and back cover below, this simple piece could be printed in red, white and blue.*

- (e) To housing groups.
- (f) Schools and Girl Scouts.
- (g) Community groups.

(2) *Through home calls*, made by Home Service personnel and in some instances by salesmen previously trained on nutrition story by the Home Service Department and further trained by the Service Department for minor service adjustments. These calls will be designed to emphasize the value of correct food selection and preservation for nutrition, economy purchasing, more home making, such as bread making, preserving, canning, the correct cookery to preserve vitamins and the care and use of appliances, the use of hot water for health and beauty.

(3) *Through tie-in with State and Local Nutrition Committees.*

#### (4) *Hand Out Material*

In all of the above work it is important to have hand out material which will cover the following points:

- (1) Food selection to obtain necessary quantity of vitamins and minerals.
- (2) Food selection to insure the vitamins and minerals have not been lost before they reach the consumer.
- (3) Food preservation to insure vitamins and minerals are not lost before they are served.
- (4) Correct cookery to preserve vitamins and minerals.
- (5) Relation of hot water to health and beauty.

There has been prepared much material on food selection to obtain correct daily need of vitamins and minerals but the vital point of preserving through correct refrigeration and cookery has been omitted. This omission has to be supplied by the gas company and it is of great importance to both the consumer and the company that this is done.

However you look at it it is an all-out effort by the gas companies' Home Service Departments for 1942.

(Description of detailed company home service plans which are a part of Mr. Henry's report begin on page 67.)

**NATIONAL  
HEALTH  
*and* DEFENSE**

**Compliments YOUR GAS COMPANY**

### 3 Golden Rules of Nutrition

[illegible]

From the *Women's National Emergency Committee*  
Presented by EASTWAY HOMESSESS' BUREAU • 4000 LEXINGTON

### 3 Golden Rules of Cookery

**GOLDEN RULE No. 1: Proper Chopping Preserves Vitamins and Minerals in Vegetables**  
**DIET RICH IN CAROTENES, VITAMINS**

*Carotenes, vitamins and minerals are lost when vegetables are cut into small pieces. Chopping preserves nutrients.*

**GOLDEN RULE No. 2: Low Temperature Cuching at high and low pressure converts soft proteins into healthy meat.**

*Low temperature cooking preserves nutrients. High and low pressure cooking converts soft proteins into healthy meat.*

**GOLDEN RULE No. 3: Safe, Multiple Refrigeration preserves the Vitamin and mineral content of both raw and cooked foods.**

*Safe, multiple refrigeration preserves nutrients. Raw and cooked foods are kept at low temperatures.*

*\* Stop the Leak in Your Marketing Budget \**

# ACT FOR *home* DEFENSE

**YOUR INCOME IS A DEFENSE WEAPON**

- 1. Plan Carefully**  
GIVE OVERSEAS your spouse, your children, yourself, others, future, savings, insurance, taxes, investments, property, credit, health, education, retirement, insurance, etc.
- 2. Stretch Your Dollar**  
KNOW QUALITY your spouse, your children, yourself, others, future, savings, insurance, taxes, investments, property, credit, health, education, retirement, insurance, etc.
- 3. Conserve Resources**  
KNOW YOUR GAS CONSUMPTION your spouse, your children, yourself, others, future, savings, insurance, taxes, investments, property, credit, health, education, retirement, insurance, etc.

**SAVE and Buy Defense Bonds** **MAKE YOUR FAMILY A UNIT FOR DEFENSE**



# Do's and Don'ts for Handling Gas Appliances

(The information below is reprinted from a pamphlet issued in January entitled "You and an Air Raid—What You Should Know" which includes a series of articles published originally in the Evening Star, Washington, D. C. In a letter reproduced in the foreword, F. H. LaGuardia, U. S. Director of Civilian Defense, states that the technical data were checked and approved by the Office of Civilian Defense.—Editor.)

**H**ANDLING gas valves in homes is really a job for trained men and scores of people are now being given the necessary training. However, there are some things that you can and should do.

These are official suggestions from the Office of Civilian Defense superseding previous instructions to shut off gas stoves, and furnaces and gas appliances on both. The changed instructions resulted from conferences with nationally known gas experts and were based on the difference between gas appliances in England and the United States.

When you hear the air-raid warning, make no attempt to shut off the main gas supply in your home. Simply turn off any stove burners that might be burning. Don't blow out the pilot light.

This means, of course, that you need not turn off any automatic gas appliances in your home. However, if you have a tank heater or other manually operated appliances in operation, all should be turned off just the same as the stove burners.

If your house should be badly damaged,

the main gas valve should be shut off. This valve is located above the gas meter on the left-hand or inlet pipe.

When open, the inlet cock, or main gas valve is parallel with the inlet pipe. When closed, the cock is at right angles to the pipe. Some of these cocks can be opened and closed by hand. Most of them, however, require a medium sized monkey or Stillson wrench.

In turning the inlet cock off, do it slowly and only if the house is badly damaged. If you can't turn it off yourself, call a plumber, a fireman, the gas company or your air-raid warden.

Once the main valve is turned off for any reason, don't turn it on again yourself. By cutting off the supply of gas, pilot lights on your gas appliances have been extinguished. Relighting these should be done by some one who has been trained for this work.

If your house has been damaged sufficiently to require turning off your gas, there will certainly be trained men called to your neighborhood. Summon one of them to assist you.

When your air-raid warden visits you be sure to show him where the gas inlet is located in your basement.

And don't worry about explosions. Although bombs have pierced many gas holders in England, causing loss of gas, they have not caused explosions. Also, the gas industry has worked out methods for stopping the flow of gas hastily where mains have been damaged and repairing breaks with equipment especially designed for rapid installation.

Industrial and commercial sales of gas have increased more than 100% during the last decade.

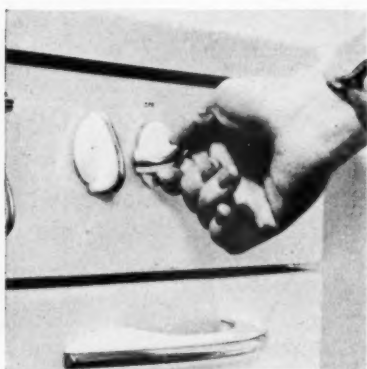


## Emergency Cabinets to Aid Utility

**S**EVENTY-EIGHT emergency cabinets like this one have been installed near the roofs of commercial buildings owned and operated by the Consolidated Edison System in New York City to cope with possible fires caused by incendiary bombs. Employees have received intensive training in the use of the equipment in the cabinet.

Consolidated Edison's cabinet is serving as a model for similar installations. The cabinet contains—1 asbestos blanket 4' x 8', 1 asbestos blanket 9' x 9', 2 metal sugar scoops, 1 36' wrecking bar, 1 8 lb. sledge hammer, 5 bags sand, 1 block and fall, and 200' 3/4" rope, 2 pairs asbestos gloves 16" long, 2 long handle square nose shovels, 2 pairs safety goggles, 3 water pails, 2 helmets, 2 emergency lights, 1 large First Aid kit, 1 stirrup pump, 3 fire pails, and 1 fire axe.

## Rule for Air Raids



One of the first official government photographs on the subject of Air Raid Protection which shows what to do to your gas range in case of an air raid alarm. This picture, which is distributed by the Office for Emergency Management, Washington, D. C., carries the caption "When an alarm sounds, turn off the gas!" Other photographs show simple "first steps in precaution" which are recommended by government experts. These pictures are being distributed in mat form for publication in local newspapers and magazines.

## Our Job

**A**LL the units which compose this great industry of ours is at its battle station, if you please. Its station is not in the chancelleries of the warring powers or in the death battalions which they have assembled for their struggle. Our military assignments will be given us by others as occasions arise, specifically, and they will be obeyed cheerfully, instantly. But our job so far as we ourselves can chart is a concentrated devotion to the better and fuller discharge of our service obligations to our customers, and of our responsibilities as stewards of the properties which have been entrusted to us. The times and the national emergencies, foreign and domestic, demand strength and more strength on the part of each unit which goes into the composition of our commonwealth. To our companies, then, and the work they do, we are to devote ourselves, in addition to discharging military orders, so that they may best yield the greatest strength to their respective communities, and these, in turn, strengthen the armed power of a united nation.

—J. FRENCH ROBINSON, Chairman, Natural Gas Section



# Know Your Market! . . . Gas Surveys

## Show Changing Trends in Utilization



Edward J. Devlin

IN an article appearing in the 1941 July-August issue of the A. G. A. MONTHLY, Hall Henry, chairman of the Market & Economic Research Committee, points out, in connection with market surveys, that the most help can come to the gas industry through each company doing those things which will throw light on its own individual conditions.

In the article referred to, Mr. Henry describes a method of conducting a survey, the data obtained by the meter reader being punched on cards and through the use of sorting and tabulating equipment, made available for market studies. In this article, Mr. Henry did not designate the exact type of information to be collected, leaving this to the judgment of the local management, because in different parts of the country, the problems that arise and data required may vary considerably. Some companies may operate as combination companies where the type of mechanical or automatic refrigeration used may not be so important. Some gas companies may be interested in kitchen heating whereas other companies may be interested in central heating.

### Meter Readers' Surveys

The kind of survey recommended is highly essential because by repetition at intervals, definite trends in the type and utilization of fuels become apparent. The Brooklyn Union Gas Company made a survey by the method described, in 1934-'35 of 275,000 one- and two-family customers to determine the market in the refrigeration and water heating fields. Cook-

- As a member of the Association's Market and Economic Research Committee, Mr. Devlin has made an intensive study of survey methods and results. In this paper he outlines what has been accomplished in his own company and suggests a course of action for others.
- Utility managers who do not wish to undertake a full-fledged market survey at this time should bear in mind that much valuable information on utilization trends and sales may be obtained at little expense as a by-product from existing statistical data in the accounting records of their companies.

By EDWARD J. DEVLIN

Research Engineer, New Business  
Department, The Brooklyn Union Gas  
Co., Brooklyn, N. Y.

ing was not included because the saturation of cooking by gas approached 100%. The survey was repeated four years later in limited areas, comprising approximately 25,000 consumers in one- and two-family houses. Tabulation "A" shows a comparison of the type of water heating equipment under the two surveys for the unit areas covered in both surveys.

### Tabulation A

#### COMPARISON OF TYPES OF WATER HEATERS FROM 1934 AND 1937 SURVEYS

Type	1934	1937
Coal Pots	5,457—23%	9,062—36%
Gas Side Arm	15,884—67%	11,941—48%
Gas Automatic	1,851—8%	2,092—8%
Oil	411—2%	2,027—8%
Total	23,603	25,122

A study of these data indicates the following:

1. The value of repeating surveys at definite intervals.

2. The increasing popularity of coal pots during period 1934-'37.
3. Decline in use of side arm heaters.
4. Increased use of oil for water heating, indicating more general acceptance of oil for central heating as most of this water heating was obtained from the oil-fired central house heating equipment.

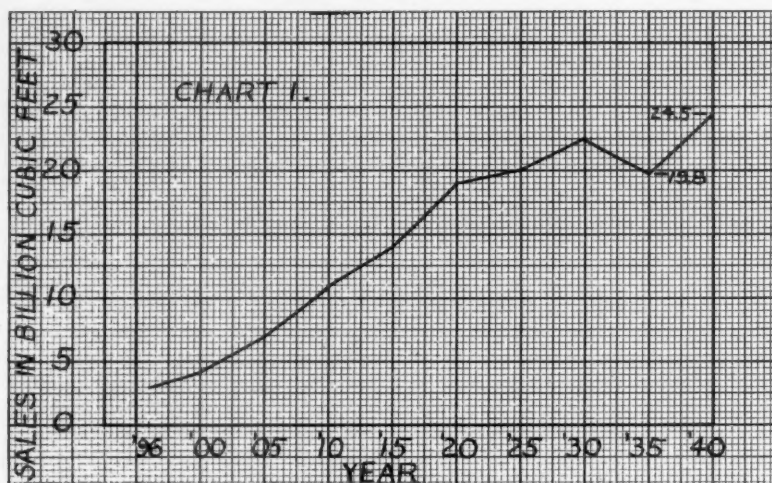
### Changing Trends

As a member of the Market & Economic Research Committee, the writer presents this paper to outline market studies that have more recently been made by our company, as possible suggestions for other companies. These several surveys have to do more directly with our position in the domestic field rather than the industrial or commercial markets. The data in some cases are necessarily based on estimates. However, the units used and procedure followed are subject to continual check and should more accurate data be obtained, the figures are changed.

It is generally conceded that with the limited number of appliances available for sale on account of war conditions, together with the more stringent stock merchandising regulations, volume appliance sales must necessarily drop off. It is opportune, therefore, at the present time to study our markets with particular reference to our competition over recent years and to determine possible future procedure.

In connection with this, it is interesting to review the history of the gas business from a marketing angle over the period back to 1896. Chart 1 shows the gas sales of the Brooklyn Union Gas system from that date up to the present time.

Very few industries have experienced such a complete change in the utilization of their product. Up to 1910 or thereabouts, gas lighting was



the principal utilization. About that time, electric companies became very active in taking over the lighting load in large volumes so that by 1920, there was very little gas lighting remaining. During this time, the writer was connected with a combination gas and electric company in Brooklyn. Although the gas lighting load was disappearing as fast as the electric department could take it over, the gas cooking load grew equally as fast with the result that the gas load continued to grow year after year.

This adaptability of the gas industry to take over other utilizations and markets has again been demonstrated by the acquisition of large blocks of refrigeration and space heating markets in recent years and the development of the commercial and industrial business. At the present time, the cooking load which 15 or 20 years ago represented 80 to 85% of our business is now estimated at 43% as indicated on Chart 2, which shows the percent of total annual gas sales used for various purposes for the year 1940. This 43% for gas cooking does not indicate that we are losing the gas cooking load but rather that other types of utilizations are being added, as indicated by the 10.7% for domestic heating and the 9% for refrigeration. During the years from 1935 to 1940, space heating increased from .8% to 10.7%, and refrigeration from 4.7% to 9%, due to ice box replacements.

### Promotional Rates

To expand, the gas industry must be supported by promotional rates and an aggressive sales force. In Chart 1, note the increase in sales from 1935 to 1940. This uplift of the sales curve was due to promotional rates adopted in December 1935 supported by an efficient promotional and sales organization. A study of appliance sales, estimated load added and actual increases in gas sales during the last three years of this five year period, is shown in tabulation "B". During these three years, the maximum effect of the promotional rates was experienced.

Tabulation B

	"1" Appliance Sales	"2" Estimated Annual Load Added in MCF	"3" Increase in Gas Sales in MCF
1938	\$ 3,116,781.12	1,386,306	867,672
1939	3,920,767.56	1,549,712	1,052,991
1940	3,534,161.64	1,285,137	1,602,393
Total	\$10,571,710.32	4,221,155	3,523,056

Note: World's Fair appliance and gas sales not included.

During this period, it can be seen from column 1 and 3 respectively that \$10,571,710.32 worth of appliances was sold and gas sales increased 3,523,056 MCF. This is 17.1% or an average for the three years of 5.7%. Column 2 indicates the estimated annual load in MCF which was anticipated to be added as a result of New Business activities. It can be seen that the estimated annual load added was considerably greater than the actual gas sales. This variation makes desirable

other market studies as well as determination of gas used by various types of appliances. Several factors would account for this difference between estimated annual load and actual increases, of which the weather is an important one. Before describing other market studies, we will point out briefly how the load added estimates are obtained as indicated in column 2.

### Estimating Load Added

In writing an appliance sale order, the salesman indicates thereon what the new appliance replaces. From this information, data are compiled on the number of appliances sold and the type of equipment replaced, thus permitting us to determine the actual load added to our lines. For example, a range sold which replaces an old range is not considered as adding any load but a range sold in a new apartment house is considered to add 12,000 cu. ft. annually.

In selling central heating equipment, we submit to each customer, an estimate of the annual consumption for a normal heating season. This estimate is based on a heat loss survey made of the premises. The estimated load added by heating equipment is determined from these estimates.

Annual load added by commercial

and industrial appliances is determined by multiplying the hourly demand by the estimated number of hours per year the equipment will be used.

We have made several studies to determine the load added by the sale of various appliances. Most of these studies are based on a comparison of a customer's account for 12 months before with 12 months after the installation of the appliance. A 12 months' period is examined in order to eliminate seasonal variations due to temperature, vacations, etc. We usually omit the consumption of one month before and one month after installa-

tion of the appliance in order to eliminate irregularities in consumption due to installation.

To determine the consumption of the average gas refrigerator added to our lines, we select a number of accounts in both apartments and one- and two-family houses where gas has been used for cooking for a number of years and gas refrigerators had been installed approximately 14 months previously. Any account was discarded where occupants of the dwelling changed within the previous 30 months or where gas was used for any purpose other than cooking and refrigeration. We then discarded one month before and one month after the date of installation of the refrigerator, and from the remaining months we obtained the total consumption for 12 months before and 12 months after installation. The difference between the totals was considered to be the load added by the gas refrigerator.

This procedure was followed for a number of refrigerators of each size in order to obtain an average figure for each size. We then tabulated the number sold during the past year by size, and by applying these figures to the average consumption by size, were able to determine the average annual consumption added by an average refrigerator. This calculation resulted in a figure for Brooklyn Union territory of 16,320 cu. ft. per year or 1,360 cu. ft. per month. These figures include an allowance for non-use during vacation periods.

To determine the average annual gas consumption of a gas range in an apartment, we totaled the annual gas consumption of a large number of apartment occupants who used gas for cooking only, discarding accounts where the occupancy changed within the period. The total was then divided by the number of apartments to get an average figure. In this way, we determine the average annual consumption for a gas range used in an apartment. In this study we also included some apartments supplied by unit meters. In these cases, the annual consumption of the unit meter was divided by the number of occupants in order to get the consumption per range.

A study was made to determine the

effect on consumption of the installation of a CP range. Accounts using gas for cooking only were considered and the effect on consumption was determined as outlined above by comparing the consumption 12 months before and 12 months after installation. Of the accounts examined, 44% showed an increase after the installation of a CP range, 51% showed a decrease and 5% showed no change. The net result showed that the installation of a CP range resulted in an average increase of 37 cu. ft. per customer per month.

### Competition

In order to set up future sales policies, it is not enough to know the sat-

uration of gas appliances, as for example, the saturation of gas central heating compared with oil and coal. In addition, we should be aware of the progress that our competitors are making over the years. Selling 1800 gas heating jobs in a year may be good merchandising but if 7,000 oil burners are sold for the same year, in the same territory, are we holding our competitive position? Are we getting our share of the available purchasing power? And what will be the picture ten years hence if this continues?

Oil burner sales figures are obtained from trade publications which publish oil burner permits issued in Brooklyn and Queens. We know that about 90% of these burners go into one-

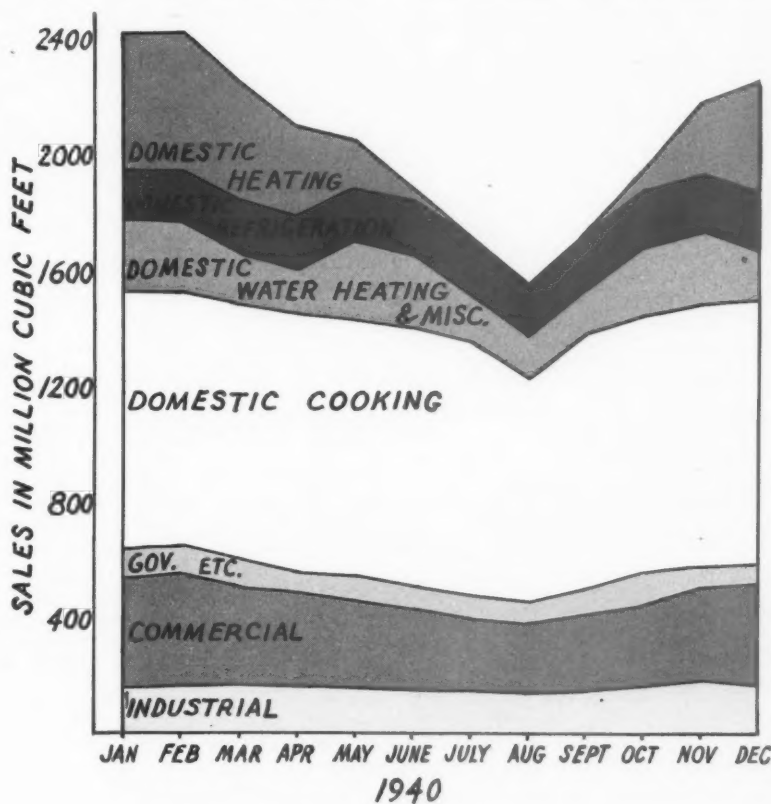


Chart 2—Use of Gas for Various Purposes (Year 1940)

Domestic Heating .....	10.7%
Domestic Refrigeration .....	9.0
Domestic Water Heating and Misc.....	10.0
Domestic Cooking .....	43.1
Governments, World's Fair, etc. ....	4.2
Commercial .....	15.1
Industrial .....	7.9
	100.0%

and two-family houses and we also know that 56% of the one- and two-family houses in Brooklyn and Queens are in the territory supplied by our company. By applying correction factors to the total permits issued in Brooklyn and Queens, we obtained figures for our territory.

The sales of gas and oil heating installations in 1- and 2-family houses in our territory for the past three years, are as follows:

Tabulation C

	Gas	Oil
1938	1,429	6,158
1939	2,171	7,268
1940	1,993	7,235
Total	5,593	20,661

As a result of past sales, the saturation of central heating among our 280,000 one- and two-family customers living in 215,000 one- and two-family houses, as of December 31, 1940, is estimated as follows:

Tabulation D

Coal	143,779	66.9%
Oil	60,977	28.3%
Gas	10,404	4.8%
Total	215,160	100.0%

From the number of consumers in one- and two-family houses using coal, there appears to be a broad market still available for gas heat. However, an analysis of this market would indicate a very great percentage of poor purchasing power consumers who could not purchase central heating equipment, nor could they pay the slightly increased cost of gas compared with coal. Thus in this market, our competition is becoming more pronounced.

We outline below two additional studies which are of value in the study of available markets. One deals with an evaluation of the sales potentiality of the entire territory by unit areas and the other describes a method of determining gains and losses in gas sales in a particular unit area.

#### Evaluating Territory for Sales Potentiality

The territory of The Brooklyn Union Gas Company is divided into approximately 200 units of comparable area. This territory is allocated among the retail salesmen on the basis of these

unit areas. In order to arrive at an equitable allocation of territory among salesmen, we evaluated the sales potentiality of each one of these unit areas on the basis of the number of one- and two-family houses in the unit, this being the most productive field for retail sales. We also obtained from census figures of rentals paid, an estimate of the purchasing power in each unit area. By a combination of factors rating the one- and two-family houses and the purchasing power of each unit, we arrived at a combined rating for each unit area. From these ratings, a sales supervisor is in a position to better allocate territory among his salesmen.

The division of the territory into unit areas originated in the Distribution Department some years ago. A monthly record is kept of the gas sales by these unit areas, thus making it possible for the Distribution Department to provide adequate distribution facilities for supplying the customers in the area. A check of this kind is essential in view of the large number of central heating jobs that have been sold in Brooklyn in the last five years.

#### Analysis of Gas Sales in a Unit Area

As an example of the study of gas sales in one of the unit areas to find out the reason for increases or de-

creases in the consumption of gas, the following describes the procedure followed.

In a unit having 1,392 one- and two-family houses, the individual gas consumption of these customers in August, 1941 was compared with the consumption for August, 1940. All accounts were eliminated where the consumption remained the same or where the occupancy of the houses had changed within the year. There remained 789 accounts showing either increases or decreases in gas consumption. This number of accounts was further decreased by eliminating all those which failed to show an increase or decrease of 800 cu.ft. or more, on the basis that this small fluctuation would not indicate any major change in the use of fuels. However, in all cases where the increase or decrease was 800 cu.ft. or more, the customers were interviewed to determine the cause for the change in consumption.

This investigation is particularly pertinent in our company because even though we have shown large increases in our sales, as shown in tabulation B, we are cognizant of the fact that at the same time, definite losses are taking place in certain utilizations. The study showed that in many cases the change in consumption resulted from

(Continued on page 79)

## Reduction in Fire Insurance Rates on Natural Gas Properties

**R**EDUCTIONS in fire insurance rates on natural gas pumping stations; air and gas lift power houses; crude petroleum and gasoline pumping stations; and separately for gasoline plants; gasoline blending plants; and gas recycling or repressuring plants have been recommended to the rating jurisdictions in the various states. It is understood that some of the jurisdictions have already adopted these changes and undoubtedly others will put them into effect from time to time.

Some of the changes are as follows:

- (1) On Pumping Derricks, the new rate will be \$2.40. It was formerly \$5.00.
- (2) On Steel Crude Petroleum Tanks with Steel Roofs of not exceeding 10,000 bbls. capacity, the new rate will be \$.80. It was formerly \$1.00.
- (3) On Leased Properties with blanket coverage, the new rate will be \$.80. It was formerly \$1.00.

- (4) Heretofore the basis windstorm rates were for 100% co-insurance. Now these same rates apply for 90% co-insurance.

Information as to the application of these rates on individual properties may best be obtained by communicating with your insurance agent or broker.

#### A British "A. G. A."?

**T**HE British gas industry is currently carrying on a great deal of discussion on post war plans for that industry. In this connection, one editor of *The Gas Times*, December 13, expresses the opinion that "the final outcome will be a reconstituted British Gas Federation—something on the lines of the American Gas Association."

It's a good set-up, we think.



# Community Program... for Gas Companies

## Provides an Opportunity for Defense Service



J. H. Warden

PRIOR to 1938 many companies were making public opinion surveys to determine the attitude of their customers toward the company and to obtain information upon which to base public policies. To an alarming degree it was found that regardless of rates and service rendered, the public felt that gas companies were not contributing as much as other utilities to the communities which they served and that they did not compare in friendliness and neighborliness. As a result of this information it was decided to appoint a committee to impress upon gas industry executives the need for building customer good will through civic activities, to sponsor a more friendly attitude on the part of companies, and to gather information on activities that were being conducted by companies throughout the country.

### Committee Activities

H. C. Thuerk, who at that time was connected with the Utility Management Corporation, was selected as chairman of this committee. Membership was made up of representatives of each of the affiliated associations. Under Mr. Thuerk's able leadership for two years the committee functioned very successfully. The first objective, that of impressing upon the industry the need for building up good will through civic activities, was carried on through papers delivered before practically every association. Information was gathered regarding other companies' activities which was sent out through frequent articles in the

\* Mr. Warden is general sales manager of the Oklahoma Natural Gas Co., Tulsa.

- In the past two years, ten articles covering the program of the Community Development Committee and the civic activities of gas companies throughout the country have been published in the A. G. A. MONTHLY.
- In this article, Mr. Warden restates the aims of his committee and describes the opportunity for gas companies to engage in home defense work and other community activities to aid our country's war effort.

By J. H. WARDEN

*Chairman, Community Development Committee\**

A. G. A. MONTHLY, through talks before the associations, and through exhibits at different association meetings.

After two years' operation a large number of executives of gas companies were polled to determine the value of the Community Development Committee and the desirability of continuing it. There was a unanimous opinion expressed that the committee should be continued and the work carried on. The committee now consists of the following members:

- J. H. Warden, *chairman*, Oklahoma Utilities Association
- J. W. West, *secretary*, American Gas Association
- G. A. Saas, Indiana Gas Association
- D. W. Flowers, Michigan Gas Association
- J. R. A. Hobson, Mid-Southeastern Gas Association
- W. L. Hayes, Mid-West Gas Association
- E. H. Lewis, Missouri Association of Public Utilities
- H. P. Richmond, New Jersey Gas Association
- R. E. Fisher, Pacific Coast Gas Association
- R. G. Barnett, Pacific Coast Gas Association
- M. A. Boylan, Pennsylvania Gas Association
- E. J. Stern, Southern Gas Association
- Ray M. Sheehy, Wisconsin Utilities Association

Ohmer Ullery, A. G. A.—Customers Relations Committee  
E. J. Boyer, *chairman*, Residential Section, A. G. A.

The national emergency which existed up to December 7 and the war in which the nation has been engaged since that time have made it necessary for utilities to change a great many of their former policies. Many companies which were fighting to hold their load now find themselves pushed to take care of the demand of the defense industries in their territories. The relocation of population due to defense industries has put a burden on many companies to take care of new housing projects. The curtailment of appliances has made it necessary to change all operations from a sales standpoint. This emergency, however, has opened up enormous fields for increased service from a community development standpoint for the employees and for the company—both as individuals and as a company.

### Home Defense Work

Most companies have accepted this responsibility. Employees from gas utilities are actively engaged in home defense work. In many communities the leadership is being furnished by utilities' employees for many of the necessary war activities such as Red Cross drives, community fund drives, and many others which are being conducted to help the armed forces as well as the civilian population during this period of emergency. In many communities employees are taking an active part in the ranks of such campaign organizations. Practically every company is promoting the sale of an ever-increasing amount of defense stamps and bonds by offering employees a payroll deduction plan for purchase of these investments as well as maintaining sales agencies through cashiers and other departments. The industrial departments are contributing a great deal



to the war effort by cooperating with industries—especially those industries that are attempting to change their plants over to the production of war materials.

Home Service departments are taking a very active part in the program for conservation of food, health and energy; and have been active in cooperation with nutrition committees throughout the country. They have assisted the Red Cross in its program of education in connection with food preparation and conservation. The Service Departments together with the Home Service group are working on plans to increase the efficiency and usability of old ap-

pliances pending the time when new ones can be obtained. Many companies have contributed a great deal by helping small dealers carry on up to the present time.

While these are only a partial list of the things which gas utilities have been accomplishing, they show that the industry as a whole has accepted the opportunity for increased service presented by the emergency.

During the coming months the Community Development Committee will gather and publish the best plans which individual companies have used in their community development activities.

## Bigger Tanks—Bigger Uses for Industrial Gas

THE method of industrial gas firing utilized by General Steel Castings Company, Granite City, Ill., to perform the complex sequential heat treatment of the new one-piece cast alloy hulls and turrets of large (57-ton) and medium (29-ton) U. S. Army tanks has just been disclosed. The Selas Company, Philadelphia, last month was awarded the contract for 14 giant furnaces (mostly continuous) in multiple batteries—all direct-fired by gas through a multiplicity of individually adjustable ceramic radiant cups. The contract is among the largest awarded in the process heating classification since the commencement of all-out war.

"Pilot" operations leading up to the full scale operation have involved six similarly direct-radiant-gas-fired units up to 82 feet long by 11½ feet wide—some using as many as 104 gas radiant cup burners distributed over furnace sidewalls to achieve the required "planned distribution" of heat and high rates of "direct heat transfer."

Most interesting features of the furnaces are associated with the severe speci-

fications covering heating uniformity and zoned full-proportioning control. Temperature variations which, in normal heat-treating practice, would be considered as insignificant, would, in the case of the new cast armor plate, produce non-uniform and unacceptable armor. The difficulty of meeting such specifications is augmented by the fact that individual hull castings for the new 57-ton "fort-on-wheels" (introduced to the nation during the week of December 8) may weigh as much as 25,000 pounds, be as large as 22 feet long by 10 feet across, and vary widely in contour and cross-section at various points. An overhead monorail conveyor system above the furnace roofs will carry the castings through the final stages of heat treatment, and thus a minimum of conveyor mechanism metal will pass through the heating and cooling zones. This conveyor arrangement has never before been attempted in such large-scale heat treating.

Thirteen months of operation of pilot installations, in producing cast armor for small and medium tanks, have proved, on

the basis of performance, that the relatively recently introduced *direct-radiant-gas-heating methods* can meet all specifications involved.

Over and above the needs of tank production, it is claimed that the partnership of new cast alloys with more uniform and accurate heat treatment will permit, in the future, considerable parts elimination, design simplification and longer life of heavy metal products.

## W. L. Shively, National Chemical Expert, Dies

By E. L. SWEENEY

Past Chairman, Chemical Committee, Technical Section



W. L. Shively

WALTER L. SHIVELY, for many years a member of the research staff of the Koppers Company and recently associated in like capacity with the Boston Consolidated Gas Company, died December 26 at his home in Watertown, Massachusetts.

Mr. Shively was born in Kansas City, Missouri in 1896. After one year at the University of Kansas and one year at Carnegie Institute of Technology—he entered the United States Army at Camp Funston, Kansas. From Camp Funston he was transferred to the Officers' Training Camp at Little Rock, Arkansas and thence to the Chemical Warfare Service at Washington, D. C. Following graduation by Carnegie Institute of Technology in 1924 he worked as a civilian employee of the United States Navy in the Experimental Ammunition Unit, now known as the Naval Ordnance Laboratory.

During Mr. Shively's association with the Koppers research laboratories he became known to members of the American Gas Association for such developments as gas dehydration, oil fogging and research projects on vapor phase gum and other distribution problems. After joining the Boston Consolidated Gas Company in 1939 he carried on a free lance investigation of gas production and distribution which resulted in a marked reduction of distribution complaints.

For many years Mr. Shively served on the Chemical Committee of the American Gas Association. He was also active in the New England Gas Association in which he served on the Production Research Committee and on the Gas Conditioning Committee and as a director of the Operating Division.

To his wife Eva Thayer Shively and seven-year-old daughter Priscilla the members of the American Gas Association extend their sympathy.



One of the army's newest war weapons, the mighty 57-ton heavy tank manufactured by the Baldwin Locomotive Works. Gas-fired furnaces play a vital part in its construction

# My Plan for Gas . . . To Increase Public Acceptance of the Ideal Fuel

## PART II TYPICAL PLAN



Robert H. Lewis

as an indication of the direction such changes might profitably follow.

THE foregoing survey clearly indicates the need of revisions in this company's policies if Public Acceptance is to be increased or even maintained at the present level. The following is offered

### 1. Replacement—Appliance Sales

This phase of the business should be vigorously attacked with augmented man power, suitably compensated. Company sales should be restricted to "CP" model ranges, and comparable quality in other products, so the purchaser can gain the *full* benefits of modern gas appliances, and thus be forged into one more solid link in the chain of Public Acceptance. As liberal terms of purchase as sound business procedure permits should be offered, and cooperation of appliance dealers and the plumbing trade obtained by agreeing to finance their sales and installations on the same basis as those originating with the company. Salesman protection should assure each prospect the utmost "closing" effort, regardless of the point of origin. Cooperative advertising allowances and other incentives should be confirmed only to dealer sales of top quality gas appliances. It is recommended that administration of this plan and other features of a well rounded dealer relations program be assigned exclusively to a qualified contact man.

### 2. Trade Relations

This plan calls for a staff member—not now provided—whose full time

- This is the second part of a paper by Robert H. Lewis which won first prize of \$150.00 in the prize paper contest conducted by the Committee on Personnel Practices. The award was presented at the Association's Annual Meeting in Atlantic City last October.
- In the first installment, published in January, Mr. Lewis presented a survey of a hypothetical company. In this issue he presents a plan of action designed to improve that company's competitive position.
- The paper will be concluded in the March issue.

By ROBERT H. LEWIS

*Washington Gas Light Company  
Washington, D. C.*

responsibility it would be to maintain effective and harmonious relations with members of the plumbing and heating trades. Such rules of standard practice in cooperative selling and in the division of labor as past experience and present circumstances direct should be set up by him.

### 3. New Construction

Sharing generously in the national building upswing, this community offers a source of important new business in the hundreds of homes now being erected. By taking advantage of this potential, the gas company cannot only gain substantial increases now, but also insure its domestic load of the future. Replacement sales are inevitably influenced by new construction installation.

It is found here that in the past the gas company has been regarded by builders and plumbers as more or less a necessary evil, along with the building inspector's office, the sewer and water departments—just something else to contend with. Service applications, meter locations, piping regu-

lations and so forth have been sources of irritation. It is proposed that deliberate steps be taken to change this condition—that the gas company identify itself as the friend and ally of the builder.

The only way this can be accomplished is by giving him service of a high order; and that can only be done under the present rapid pace of building by creation of a special department with an adequate field staff. Its function would be to serve the home builder, the home designer and the home owner. Through such service the company would gain a new source of consumer approval, appliance sales and Public Acceptance. By intimate and timely personal contact with builders the new construction representative of the gas company could influence the selection of proper basement and kitchen equipment. His efforts to convert the builder to the use of CP quality ranges and other appliances should be generously backed by advertising of the points of difference in such merchandise—so the new home buyer will not be content with less.

His job would be to promote the maximum use of gas in new construction by gaining the confidence and appreciation of the building fraternity. This special representative would be the single contact through which a builder could reach the several departments dealing with some phase of new construction, which heretofore he has had to call on individually. He would as far as possible anticipate the builder's requirements—all the way from the main extension to a meter set.

Through numerous contacts with builders and architects, through promptly following Dodge reports, and otherwise, this representative could usually learn of impending new construction well in advance of the building permit. This would permit the

earliest possible contact with an owner—often vital, especially in regard to heating specifications. The new construction specialist should materially assist the process of educating the builders in the practice of cold resisting construction, thus multiplying the number of desirable heating prospects—present and future.

One important function of the new construction division would be to maintain as close contact as practicable with real estate brokers and builders' salesmen in furtherance of gas heating, properly instructing them not only in the advantages of gas heat but also in reasons why it can usually be enjoyed at ultimately no greater cost than would be paid for an inferior heating service. Another purpose of this department would be to effect favorable relations with wholesale supply houses, encouraging them by every means possible to sell gas equipment.

Approach to new construction business can be effected through the kitchen—adequately meeting the challenge of electrical cooking. To this end it is proposed a complete program of education and demonstrations on modern gas cookery be directed toward the home owner—individually, and collectively through the medium of the company home service department.\*

Another approach to this market is via the basement—through the medium of winter heating (and now probably summer cooling) service, which will be discussed briefly as applying to this Public Acceptance program.

#### 4. Air Conditioning

It has for some years been unnecessary for a gas company to sell the advantages of automatic heat—that job has long since been ably done by the gas industry and others. Air conditioning of the winter type is rapidly reaching a stage when the gas salesman can concentrate more on the merits of his fuel. But it is still so new as to cause some purchasers to hesitate, and to welcome the supporting opinion and engineering counsel of the gas company. This is a specific service which can effectively be applied in the new construction field. Being fraught with

\* This is dealt with at greater length in a succeeding section of this report.

numerous pitfalls which utilities having earlier and more extensive dealings with it have already encountered, it behooves this company to exercise extreme caution in defining its position as it relates to aid conditioning installations. Care should be especially taken with regard to the company's approval of equipment design, installation standards, after-service and the responsibility of a heating contractor.

With a clearly stated policy and an adequate engineering service for testing equipment and recommending installation procedure, the gas company should be in position to offer unrivaled service in this rapidly developing market. The advent of a Servel combination summer-winter unit permits the gas company to step well out in front of all competitors—to identify itself anew as the exponent of an alert, progressive industry. A special method of exploiting that innovation in connection with other modern gas facilities is hereinafter proposed; it is suggested however that this company actively seek opportunities for its installation among selected new construction prospects.

#### 5. Manufacturer Relations

Whether it be air-conditioning units or other appliances, it is important under this plan to enlist the cooperation of manufacturers. Once they know the gas company is prepared to back them with promotion and service, they will bring their merchandise to this market, find a suitable means of distribution, and provide a generous measure of assistance in gaining Public Acceptance for it—as has been amply proven elsewhere.

#### 6. Personnel Relations

Of greatest value in an effective public relations programs is an informed and loyal personnel. In the case under discussion, where there is no director of personnel, employment and training responsibility is decentralized. It is only by chance that workers here ever constitute themselves any public relations asset. Rank-and-file employees know little about the company beyond their own departments, and few are at all prepared to even begin to talk intelligently on the advantages the fuel offers for the home.

In this particular community there has somehow been implanted a local tradition that "the gas company is a good place to work." This is a foundation on which to build. With a little instruction, the workers themselves can tell the public why the company is a good place to work, why it is a good institution for the city, why its complete service is good to have in one's home. Making such information available to employees however is not enough. There must be a desire—the willingness to absorb it, the volition to use it at every opportunity. This can be based only on intelligent loyalty and the employee's proprietary interest in his company—which it is the function of a personnel department to engender.

#### 7. Conclusions

The foregoing has dealt with recommendations which call for reorganization of several operating departments directly or indirectly along load building lines.

Public Acceptance in this case is somewhat a matter of more closely applying the fundamentals of approved specialty selling:

- (a) locating all available prospects (through intensively canvassing the replacement market and gaining advance knowledge of forthcoming new construction);
- (b) promptly and efficiently covering such prospects with a highly individualized—a personal approach to their particular equipment needs—so they can become fully aware of all that gas has to offer them.

Such direct selling effort must of course be conducted against a background of sound advertising, quality control measures and adequate service facilities. Under those conditions there should result a steady increase in the number of satisfied consumers on the company's line, thus providing a basis for enduring Public Acceptance.

With no primary phase of engineering, sales or service, neglected, attention of this hypothetical utility operation—or any other gas company—can logically and profitably be directed to certain extraneous projects whose exclusive function is that of stimulating Public Acceptance.

# Natural Gas Coordinating Groups for 48 States Set Up to Speed Defense Work



J. French Robinson



Burt R. Bay



N. C. McGowen



R. W. Hendee



William Moeller

AS the latest step in a program to put the nation's vast natural resources into the job of winning the war, the Office of Petroleum Coordinator for National Defense on January 7 announced organization of natural gas and natural gasoline committees in five districts, embracing the forty-eight States.

These committees, enlisted from the industry, will cooperate with the Natural Gas and Natural Gasoline Section of the Office of Petroleum Coordinator.

Invitations to serve on the committees, based on nominations made by representatives of the industries themselves, have been extended by the Petroleum Coordinator in telegrams to 49 outstanding members of the natural gas and natural gasoline groups. Only experienced operating executives, familiar with the technical problems of their respective fields, have been considered in setting up the new organization. Balances have been sought between large and small companies, between independents and companies affiliated with major oil companies or public utility holding companies, and between the two industries consistent with their relative importance in each district.

## Relationship to War Effort

"Coordination of natural gas and natural gasoline production, as of petroleum, is necessary because of the important relationship which it bears to the over-all war effort," Petroleum Coordinator Harold L. Ickes said in announcing the new set-up.

"The active cooperation of men skilled and experienced in this highly technical operation is the first and most logical step in that direction.

"The principal duty of the committees will be to assist their Government in guaranteeing maximum war-time benefits from these two essential national resources. Both natural gas and natural gasoline contain materials necessary to the production of 100-octane aviation gasoline, the increased production of which is so necessary at this time.

Moreover, there must be maintained a constant and adequate flow of gas to the industrial and population centers of the nation to meet war, industrial and civilian demands."

The organization was undertaken pursuant to the terms of the President's letter of May 28, creating the Office of Petroleum Coordinator, in which the President stated that one of the important problems to be solved was "the proper development, production, and utilization of these reserves of crude oils and natural gas that are of strategic importance both in quality and location."

The following membership designations have been made by the Petroleum Coordinator by districts:

**DISTRICT No. 1 (East Coast)** comprising the States of Maine, New Hampshire, Vermont, Massachusetts, Connecticut, Rhode Island, New York, Pennsylvania, New Jersey, Delaware, Maryland, West Virginia, Virginia, District of Columbia, North Carolina, South Carolina, Georgia, Florida, Ohio and Kentucky—(Note—For purposes of this committee, the States of Ohio and Kentucky have been included in District No. 1 instead of District No. 2 as in other sectional organizations.) (19 and the District of Columbia.)

J. French Robinson, President, East Ohio Gas Company, Cleveland, Ohio, *chairman*.

Loring L. Tonkin, President, Hope Natural Gas Co., Clarksburg, W. Va.

G. E. Welker, President, United Natural Gas Co., Oil City, Pa.

H. A. Wallace, Jr., Vice-President, United Fuel Gas Co., Charleston, W. Va.

H. D. Freeland, Waynesburg, Pa.

Samuel Brendel, President, Brendel Producing Co., Pittsburg, Pa.

Dan S. Keenan, President, Carnegie Natural Gas Co., Pittsburgh, Pa.

D. P. Hartson, General Manager, Equitable Gas Co., Pittsburgh, Pa.

Thomas H. Kerr, Vice-President, Ohio Fuel Gas Co., Columbus, Ohio.

R. N. Parks, Vice-President, Virginian Gasoline and Oil Co., Charleston, W. Va.

**DISTRICT No. 2 (Mid West)** comprising the States of Michigan, Indiana, Illinois, Missouri, Oklahoma, Kansas, Nebraska, Iowa, Minnesota, Wisconsin, North Dakota, South Dakota and Tennessee. (13)

Burt R. Bay, President Northern Natural Gas Co., Omaha, Neb., *chairman*.

A. W. Ambrose, Vice-President, Cities Service Gas Co., Bartlesville, Okla.

Joseph Bowes, President, Oklahoma Natural Gas Co., Tulsa, Okla.

E. V. Kesinger, Gen. Supt., Natural Gas Pipeline Co. of America, Chicago, Ill.

W. C. Taggart, Taggart Bros., Inc., Big Rapids, Mich.

C. S. Sanders, Stanolind Oil and Gas Co., Tulsa, Okla.

Edward Buddrus, Phillips Petroleum Co., Bartlesville, Okla.

Joseph A. LaFortune, Vice-President, Warren Petroleum Corp., Tulsa, Okla.

H. M. Stalcup, Skelly Oil Co., Tulsa, Okla.

Major T. J. Strickler, Vice-President, Kansas City Gas Co., Kansas City, Mo.

**DISTRICT No. 3 (Gulf Coast)** comprising the States of Texas, New Mexico, Louisiana, Arkansas, Mississippi and Alabama. (6)

N. C. McGowen, President, United Gas Pipeline Co., Shreveport, La., *chairman*.

R. E. Wertz, President, Amarillo Gas Co., Amarillo, Texas.

Lawrence R. Hagy, Hagy, Harrington & Marsh, Amarillo, Texas.

Paul Kayser, President, El Paso Natural Gas Co., El Paso, Texas.

C. Pratt Rather, President, Southern Natural Gas Co., Birmingham, Ala.

E. F. Schmidt, Vice-President, Lone Star Gas Co., Dallas, Texas.

Ted Goebel, Shell Petroleum Corp., Houston, Texas.

J. H. Boyle, Secretary, Hanlon-Buchanan Gasoline Co., Tulsa, Okla.

Clyde Alexander, Dallas, Texas.

J. H. Dunn, Vice-President, Shamrock Oil and Gas Corp., Amarillo, Texas.



DISTRICT No. 4 comprising the States of Montana, Idaho, Wyoming, Utah and Colorado. (5)

Robert W. Hendee, General Manager, Colorado-Interstate Gas Co., Colorado Springs, Colo., *chairman*.

Cecil W. Smith, Chief Engineer, Montana-Dakota Utilities Co., Minneapolis, Minn.

J. M. McIntire, President, Northern Utilities Co., Casper, Wyo.

F. T. Parks, Gen. Supt., Public Service Co. of Colorado, Denver, Colo.

R. D. Smith, Supt. of Gas., Glacier Production Co., Butte, Mont.

J. D. Roberts, Vice-President, Mountain Fuel Supply Co., Salt Lake City, Utah.

E. B. Coolidge, President, Hard Rock Oil Co., Great Falls, Mont.

J. C. Johnston, Gen. Supt., Continental Oil Co., Denver, Colo.

John T. Bishop, Basin, Wyo.

DISTRICT No. 5 (Pacific Coast) comprising the States of Washington, Oregon, California, Nevada and Arizona. (5)

William Moeller, Vice-President, Southern California Gas Co., Los Angeles, Calif., *chairman*.

George F. Schroeder, Manager, Gas Division, Standard Oil Co. of California, San Francisco, Calif.

E. H. McCullough, Amerada Petroleum Corp., Los Angeles, Calif.

A. F. Bridge, Vice-President, Southern Counties Gas Co., Los Angeles, Calif.

W. G. Vincent, Vice-President, Pacific Gas and Electric Co., San Francisco, Calif.

H. L. Farrar, President, Coast Counties Gas Co., San Francisco, Calif.

R. H. Green, Vice-President, Signal Oil and Gas Co., Los Angeles, Calif.

H. L. Eggleston, Gilmore Oil Co., Los Angeles, Calif.

H. R. Linhoff, Richfield Oil Corp., Los Angeles, Calif.

L. V. Cassaday, General Manager, Loneita Gasoline Co., Long Beach, Calif.

District chairmen will serve under the plan of organization as members of the General District Committees for their respective districts.

## New Type Paint Aids in Camouflage

A NEW type of low visibility paint, possessing exceptional heat deflecting qualities, has been developed by The Arco Company, Cleveland, for use in the protective concealment of vital defense structures and equipment. Already in use on certain government properties, the new paint is said to meet tentative Navy specifications for infra-red reflecting paints for use on fuel storage tanks, buildings, and certain types of equipment where dark colors as well as heat reflecting qualities are required.

Known as "Infray," this type of paint is expected to be of particular value to public utilities.



Advertising displays that ring the bell

## New Themes in Advertising

By R. R. KIRKEY

*Sales Manager, Central Illinois Electric and Gas Company  
Freeport, Illinois*

WE'RE in it all the way now! It's "all-out" for the duration—and all our plans, advertising and otherwise, must be considered in light of this fact. Different and timely advertising appeals must be worked out to continue telling, in a new way, the advantages of Gas Service. It's a real challenge to the ingenuity of every sales and advertising man associated with the gas industry. We do have something to sell! Our advertising for the future is looked upon as a form of security—good-will security—building for the future.

In answer to this challenge the Bishop Publishing Company, 155 East Superior St., Chicago, from whom we've been receiving displays regularly for several years, recently sent us a series of displays on "baking cakes and cookies for the boys at camp." This is a brand new Morale Building Civilian Defense theme that can be elaborated on and worked into a very successful campaign. We consider this series of displays most unusual and appropriate, and a good example of the new way to sell Gas Service.

To further elaborate on the use of these displays, they also furnished us several pages of recipes of cakes and cookies suitable for packing and shipping that were prepared in cooperation with the Wheat-Flour Institute. Also included were several suggestions for their use, such as: weekly contests; "recipe of the week" advertisements; how to pack and ship and etc., etc. It is our plan to use these sug-

gestions, along with our own, in our forthcoming promotions.... and, it is my thought that other gas utilities would also be interested.

Bishop Publishing Company recently advised us that some of the future displays will be on a similar theme including some thoughts on American creative enterprise, what our American free institutions mean, and how we, in the gas industry, are co-operating to help win this war. Advertising of this sort is designed for the long range—it is a social force that can be used to convey ideas and create good-will. Our one goal now is complete and final Victory, and it is my conviction that displays of this nature will definitely help us win.

## Lower Insurance Rates for Performance Bonds

THE Insurance Committee of the American Gas Association, Reginald Fleming, chairman, announces that the Towner Rating Bureau, Inc., which is the organization of the insurance companies having jurisdiction over rates for contract bonds and similar instruments, has reduced the rates for performance bonds required to be given by public utilities in connection with contracts for supplying gas or electric lighting to cities or municipalities.

The old rate was \$2.50 per \$1,000 of the annual contract price with a minimum annual premium of \$5.00. The new rate is \$2.00 per \$1,000 of the annual contract price with a minimum annual premium of \$5.00. This change in rate was effective December 12, 1941 on performance bonds covering new contracts. On current bonds the reduction becomes effective on the anniversary dates.



# Personal AND OTHERWISE

## Veteran U. G. I. Executives Retire After Long, Fruitful Careers



P. H. Gadsden



F. J. Rutledge

**T**HREE veteran officials of The United Gas Improvement Company, Philadelphia—Phillip H. Gadsden, senior vice-president; F. J. Rutledge, operating vice-president; and John M. Hubbs, vice-president, purchasing—retired from active service on December 31, after many years devoted to U.G.I. and public utility industry affairs. Their terms of service with the U.G.I. were 31 years, 39 years and 51 years, respectively. Resolutions in appreciation of



John M. Hubbs

their service were adopted by the U.G.I. board at its December meeting.

Mr. Gadsden gained national prominence in the public utility industry for his outstanding work as chairman of the National Committee on Public Utility Conditions during the World War and, subsequently, as chairman of the Committee of Public Utility Executives, organized for the protection of the interests of millions of security owners in the industry. Widely known as "the spokesman of the industry," he was awarded the U.G.I. Company's Samuel T. Bodine Meritorious Service Award in October, 1935, for his services in organizing and heading the Committee of Public Utility Executives.

Mr. Rutledge was elected vice-president of The United Gas Improvement Co. in

1923 and has served as a director and officer in various companies in the system. For 16 years he served as president of The United Savings and Beneficial Association.

During his many years of service, Mr. Rutledge has contributed greatly to the advancement of the gas industry. He has been chairman of two important committees of the American Gas Association since they were formed, the Committee on Industrial Gas Research (April, 1926) and the Committee on Domestic Gas Research (March, 1935). Under his leadership the broad A.G.A. program of utilization research in the industrial, commercial and domestic fields, was organized and carried out. He was also a member of the Association's National Defense and National Advertising Committees.

Mr. Hubbs was the oldest man in point of years of service in The U.G.I.

## Joins A. G. A. Laboratories' Managing Committee



N. B. Bertollette

**F**ILLING the vacancy caused by the resignation of N. T. Sellman, assistant vice-president of the Consolidated Edison Company of New York, Inc., Norman B. Bertollette, president and general manager of the Hartford Gas Company, was recently appointed a member of the Laboratories' Managing Committee. He is the first executive from the New England area to become a member of this group.

Mr. Bertollette's activities in the gas industry and in the American Gas Association are well known as the result of more than 30 years' varied experience in utility company management and operation. Since graduating from Drexel Institute of Technology in 1911 with a mechanical engineering degree, Mr. Bertollette has served in many capacities in the gas industry. Following the acquisition of the American Gas Company by The United Gas Improvement Company in 1926, he was promoted to district manager of the Philadelphia Electric Company. From 1929 to 1935 he served as president of the Harrisburg Gas Company, and in October, 1935, was appointed president and general manager of the Hartford Gas Company.

## Wins McCarter Life-Saving Award



National recognition comes to Howard L. O'Neale (second from left) of the Consolidated Gas Electric Light and Power Company of Baltimore for having performed an outstanding act of life saving. He is photographed here receiving the McCarter medal and certificate awarded by the American Gas Association and the congratulations of his company's officers. Left to right are: R. H. Arndt, superintendent, gas manufacturing; Mr. O'Neale; H. R. Cook, Jr., vice-president; and John H. Wolfe, general superintendent—gas and vice-chairman, A. G. A. Technical Section.

## Cullen Appointed To Defense Posts

**G**EORGE L. CULLEN, manager of the sales department of The Harrisburg Gas Company, Harrisburg, Pa., has been appointed chief of utilities' service for the Harrisburg-Dauphin County Defense Council, and chairman of the Utilities' Communications Committee of the Red Cross Disaster Relief Committee. This appointment was made by Mayor Howard E. Milliken, United States Local Director of Defense.

Members of this committee are utilities representatives covering telephones, radio, telegraph, gas, electric power and light, railroads, railways, busses, taxicabs and private automobiles.

## H. J. Mandel Appointed

**H**ENRY J. MANDEL, formerly manager of the gas heating department of the Metropolitan Edison Company, Easton, Pa., has been appointed sales representative and assistant to the chief engineer of the Richmond Radiator Co., Inc., Uniontown, Pa., manufacturers of gas boilers, air conditioning equipment and enameled sink ware. Mr. Mandel is a member of the American Gas Association and has been active in the Residential Section. His home address is 346 Morgantown St., Uniontown, Pa.

## To Ration Tires

**F**CHRISTOPHER WEBER, of Glen Head, L. I., a former vice-president of The Brooklyn Union Gas Company, has been named deputy administrator of the Tire Rationing Board under the chairmanship of Harold W. McGraw.

## Father of Home Service Dies

**P**HILMER EVES, a pioneer in the field of social hygiene and founder of the home service movement, died January 12 at his home at Topsham, Maine. He was 84 years of age.

While an official of the Paterson (N. J.) Gas Company, Mr. Eves organized one of the first home economics courses sponsored by public service corporations. He helped found the Indiana Gas Association while with the Indianapolis Gas Company, and was advertising and sales manager of the New Haven (Conn.) Gas and Light Company for nine years before his retirement in 1929.

Mr. Eves was largely responsible for organization of a national home service movement in the gas industry. In 1922, while associated with the New Haven company, Mr. Eves was appointed chairman of an A. G. A. committee to make a study of home economics work as it was being done throughout the gas companies.

At the A. G. A. Convention in 1923, Mr.

Eves reported that 14 gas companies then had home economics departments in operation, 31 companies had indicated an intention to establish a department, and 39 were interested in home service. He recommended that the Home Economics Service Committee, as it was called then, should continue to function and proposed that the Commercial Section should appoint a home service director as chairman of this committee. The Section endorsed his recommendation and appointed Ada Bessie Swann of the Public Service Electric & Gas Co., Newark. Home service progressed rapidly thereafter through the efforts of this committee and in 1926 an A. G. A. home service counselor was appointed and the present organizations set up.

Mr. Eves leaves a widow, four sons, James of Palisades, N. J.; Philmer of Paterson, N. J.; Arnold of New York and William of Topsham, and a daughter, Mrs. Betsy Preater of New York.

## Wolf Heads Atlanta Business Group

**H**CARL WOLF, president and general manager of the Atlanta Gas Light Company, and 1941 chairman of the A. G. A. Industrial and Commercial Gas Section, has been elected president of the Atlanta Chamber of Commerce. Mr. Wolf, a leader in Atlanta civic affairs since going to Atlanta in 1938, is a director of the American Gas Association and president of the Southern Gas Association.

## Brooklyn Men Get New Posts

**E**FFECTIVE January 1, The Brooklyn Union Gas Company announced the following promotions: Clarence S. Goldsmith was named engineer of distribution; Samuel Green became assistant engineer of manufacture; Clyde E. Cheeseman, was appointed assistant to engineer of manufacture; and Bertin A. Bisbee was promoted to superintendent of Greenpoint Works.

An active worker in the Technical Section of the American Gas Association, Mr. Goldsmith is this year's chairman of the Distribution Committee. Mr. Green is a member of the Gas Production Committee and has served on many committees of the Association.

## On Defense Council

**J**ACK TORBERT, new business manager of the Wyandotte Gas Company in Kansas City, Kans., and chairman of the Water Heating Committee of the Residential Section, A. G. A., is serving as a member of the Kansas City Defense Council. He was one of 15 recently named to the council by Mayor McCombs.

## James F. Hunter Retires; Had Notable Career

**J**AMES F. HUNTER, vice-president of J Consolidated Edison Company of New York, Inc., who lives at 17 Longue Vue Avenue, New Rochelle, New York, retired from the company on December 31. Mr. Hunter has spent thirty-seven years in the gas branch of Consolidated Edison System Companies.

During Mr. Hunter's career, the company built two of the world's largest gas plants, at Astoria, Long Island, and at Hunts Point in the Bronx, much of these big undertakings coming under his direct supervision. In 1904 Mr. Hunter started as a draftsman in the Construction Department of Consolidated Gas Company (which was the name of the company then) and became successively engineer's assistant, field engineer, and engineer of construction. He was elected an assistant vice-president of Consolidated Edison in 1937, three years later becoming vice-president in charge of gas production, technical service, and gas storage and control.

Technical societies of which he is a member are the American Society of Mechanical Engineers, the Society of Gas Lighting of which he was at times treasurer, vice-president and president, and the American Gas Association. He is a licensed professional engineer of the State of New York, a member of the Delta Tau Delta fraternity, and a member of the Engineers, and the Coveleigh Beach clubs.

Mr. Hunter plans to devote much of his time to war emergency work.

## Philadelphia Co. Makes Executive Changes

**L**EO T. CROWLEY, chairman of the Federal Deposit Insurance Corporation, was elected president of the Philadelphia Company of Pittsburgh on January 20. Frank R. Phillips, who has served as president of the company for many years, was elected chairman of the board and the executive committee. Philip A. Flegler, general attorney, was named senior vice-president of the company. Mr. Crowley is also president of the Standard Gas and Electric Company, which controls the Philadelphia Company.

In other executive changes made in companies affiliated with the Philadelphia Company system, Pressly H. McCance was elected president of the Duquesne Light Company, Franklin F. Schauer was named president of the Equitable Gas Company and the Pittsburgh and West Virginia Gas Company, and D. P. Hartson was named vice-president of the Equitable and Pittsburgh and West Virginia companies.

Mr. Hartson was last year's chairman of the Technical Section of the American Gas Association and is present chairman of the Section's National Defense Committee.

# AFFILIATED ASSOCIATION

## Activities

### Atlanta To Be Scene of Southern Convention and Sales Conference



H. Carl Wolf

will be held at the Atlanta Biltmore Hotel, Atlanta, Ga., February 9, and 10.

A group of the gas industry's top-flight executives will participate in the two day sessions and the keynote theme of the convention will be "How Can the Gas Industry Contribute Most Effectively Toward Winning the War." This theme will be carried through both of the general sessions meetings scheduled for Monday morning, February 9, and Tuesday morning and afternoon. Wesley F. Wright, vice-president, Dallas Gas Company, Dallas, Texas, will act as the discussion coordinator.

#### President Hawley to Speak

Monday's General Session program will be highlighted by an address by George S. Hawley, president, American Gas Association and an address of welcome by Preston S. Arkwright, president, Georgia Power Company, Atlanta, Ga., and an address by H. Carl Wolf, president of the Southern Gas Association who will preside at the general sessions meetings. George F. B. Owens, assistant vice-president, The Brooklyn Union Gas Company, Brooklyn, N. Y., will participate in the discussion of the convention theme on the subject, "Protecting Our Properties."

The Residential Gas Sales Conference will be held Monday afternoon at 2 P.M. at which the Chairman John H. Warden of the Oklahoma Natural Gas Company, Tulsa, Oklahoma, will preside. Widely known gas executives will address this session including Davis M. DeBard, vice-president, Stone & Webster Service Corp., New York, N. Y.; George S. Jones, vice-president, Servel, Inc., Evansville, Indiana, and G. M. Rohde, Jr., Ruud Water Heat-

ing Company, Pittsburgh, Pa. The titles of the addresses will be "Gas Service Promotion During the Emergency," "Putting Our Refrigerator Market On Ice" and "Hot Water and Health" in the order of the speakers listed.

An effective Home Service Program will be held Monday afternoon with Emma Wood, Louisiana Public Utilities, Inc., Lafayette, Pa., who is the current A. G. A. Home Service Chairman, presiding. This program will feature outstanding speakers, an effective skit and a round table discussion relative to Home Service and the part that it will play in "Nutrition for National Defense."

On Tuesday's general session, the war theme will be continued and H. R. Cloud, vice-president, Florida Public Service Company, Orlando, Fla., will cover "Maintaining Service." Frank C. Smith, president, Houston Natural Gas Company, Houston, Texas, will discuss "Sales" in relation to the theme topic and Eugene D. Milener, secretary, A. G. A. Industrial and Commercial Gas Section, will discuss "Associational Activities." D. C. Schnabel, Bozelle and Jacobs, Houston, Texas, well-known advertising executive, will discuss "Advertising" and Emma Wood will discuss "Home Service."

The convention theme will be concluded at the afternoon general sessions program on February 10 with a discussion of "Personnel" by A. B. Paterson, president, New Orleans Public Service Co., Inc., New Orleans.

An effective I. Q. Hour, entitled "Professor What" featuring Lloyd C. Ginn, chairman, Sales Promotion Committee, Association of Gas Appliance & Equipment Mfrs., John Bogan, A.G.A.E.M., A. B. Parker, A.G.A.E.M., and a sales-slanted presentation, "See 'Em & Sell 'Em" by Carl A. Sorby, Geo. D. Roper, Corp., Rockford, Ill., will complete the session.

The Residential Gas Sales Conference Luncheon will be held February 9 at 12:30 P.M., highlighted by an address by Harrison Jones, vice-president, Coca Cola Company, Atlanta, Ga., and a special luncheon sponsored by the Atlanta Gas Light Company will be held at 12:30 on Tuesday afternoon followed by an address by Rev. Pierce Harris, Atlanta, Ga.

### Pacific Coast Gas Association

THE Pacific Coast Gas Association will hold its annual meeting in San Francisco, Calif., on Monday, September 28, the day prior to the opening of the American Gas Association convention in the same city. Because a one-day meeting will not suffice for hearing reports of all committees, the usual spring conferences will be held late in the spring in Los Angeles and be substituted for the usual P. C. G. A. convention sessions.

Tentative dates for the conferences have been selected as follows:

Technical Section, H. P. George, chairman, May 21 and 22.

Sales and Advertising Section, J. E. Kern, chairman, June 4 and 5.

Accounting Section, L. W. Coughlin, chairman, June 11 and 12.

Announcement of the Manufacturers' Section annual meeting will be made after its general chairman, C. O. Menig, has met with that group's executive committee.

### Columbia Gas Course Popular in 1941

THE Columbia University course in American Gas Practice conducted by Prof. J. J. Morgan, maintained its popularity during 1941 as one of the most thorough and comprehensive courses on the gas industry. There were 33 new enrollments during the year and 21 students completed the course. At the end of 1941 there were 64 students enrolled and new enrollments for 1942 were being received. In spite of the conditions of the times, Prof. Morgan indicated that interest was being well sustained.

### Three Employees Win McCarter Medals

THREE employees of gas companies were honored in December when they received McCarter medals and certificates for having performed outstanding acts of life saving by the Schafer prone pressure method of resuscitation. The award is made by the American Gas Association to those who are judged to have acted above and beyond the call of duty.

This national recognition went to: Leo Ball, gas service foreman, Gary Heat, Light and Water Company, Gary, Ind.; Edward R. Quinn, and Michael V. O'Connor, both of the Consolidated Edison Co. of New York, Inc. Mr. Ball is the first Gary man to join the honor roll of McCarter medal winners. He received his award at the annual Christmas party and banquet in the Gary Hotel.

The McCarter awards were originated by Thomas B. McCarter, chairman of the board, Public Service Electric and Gas Co., Newark, N. J.

## A Victim of War

WITH the situation muddled by supply and production difficulties, the 1942 advertising campaign of the electric range division of the Modern Kitchen Bureau slowed to a walk this week, and no one in the industry was willing to forecast when it might again move forward at a faster pace.

Following a series of confabs which have extended over many months, and which originally were designed to change the Bureau's copy slant so as to make it more suitable to defense thinking, the range section of the campaign ultimately was ordered

halted after the exigencies of war made it apparent that further tightening of supply difficulties, rather than any possible easing, could be expected. \* \* \* \*

The Modern Kitchen Bureau, which is sponsored by members of the Edison Electric Institute and National Electrical Manufacturers Association, has devoted itself primarily to the promotion of the "all-electric kitchen." \* \* \* \*

The American Gas Association campaign is continuing without interruption, using a budget equal to that of last year. The association's advertising fiscal year runs from July 1 to June 30, hence the present program will continue through June issues. The

only change in the gas association's plans thus far has involved a shift in emphasis in copy from products to food values.

—Advertising Age, Jan. 12, 1942.

## Brewster Heads Natural Gas Coordinators

ORGANIZATION of a Natural Gas and Natural Gasoline Section for District 1 has been announced by the Office of Petroleum Coordinator for National Defense in a move to maintain and augment supplies of essential fuel necessary to keep defense industries of the Appalachian area running at full capacity.

With Frank M. Brewster, of Bradford, Pa., as chief, and Virgil F. Bowyer, of Pittsburgh, as assistant chief, the new section will coordinate activities of the natural gas and natural gasoline industry throughout the district, but particularly in the Pittsburgh-Cleveland-Youngstown industrial region which annually consumes a large percentage of the nation's natural gas.

Within the district are 19 states and the District of Columbia. The states of Ohio and Kentucky, normally considered in District 2, have been included in District 1 under the new set-up for administrative reasons.

Mr. Brewster, who is on leave of absence as president and general manager of the Belmont Quadrangle Drilling Corporation and president of Otis Eastern Service, Inc., has had 32 years' experience in the oil and gas business.

## Joseph F. Weeks Dies

JOSEPH FRANCIS WEEKS, chief accountant of Kings County Lighting Company, Brooklyn, N. Y., died suddenly at his home in Brooklyn on December 8, 1941. He was 51 years old.

Mr. Weeks came to Kings County Lighting Company in 1918. His activities in the American Gas Association during the last 15 years were practically continuous, notably in the General Accounting Committee. During his service in the Accounting Section he was actively identified with committees on Coding Material and Supplies, Mechanical Office Equipment, Depreciation, Internal Audits, Managing, Special Discussions, Filing and many others.

He was a member of the Comptrollers Institute of America, National Office Management Association, Park Association of U. S., Brooklyn Management Club and many civic organizations of Brooklyn.

Besides his widow, Mr. Weeks is survived by two sons.

## Fruit for the Army

More than 2523 carloads of canned fruits already have been purchased to feed the Army during the fiscal year ending June 30, 1942, according to Colonel F. J. Riley, Quartermaster Supply Officer. This would make 50 trains of 50 cars each with an average of 40,000 pounds per car.

## CONVENTION CALENDAR

### FEBRUARY

- Feb. 9-10 Southern Gas Association and A. G. A. Southern-Southwestern Gas Sales Conference  
Biltmore Hotel, Atlanta, Ga.  
17-18 Eastern Natural Gas Sales Managers' Round Table  
Roosevelt Hotel, Pittsburgh, Penn.

### MARCH

- Mar. 2-6 American Society of Testing Materials  
Cleveland, Ohio.  
12-13 A. G. A. Industrial and Commercial Gas Sales Conference  
William Penn Hotel, Pittsburgh, Pa.  
16-17 Wisconsin Utilities Association, Gas Section  
Schroeder Hotel, Milwaukee, Wis.  
19-20 New England Gas Association  
Boston, Mass.  
23-24 Oklahoma Utilities Association  
Biltmore Hotel, Oklahoma City, Okla.

### APRIL

- Apr. 13-15 Mid-West Gas Association  
Sioux City, Ia.  
19-21 Gas Meters Association of Florida-Georgia  
Savannah, Ga.  
21-23 Southwestern Gas Measurement Short Course  
University of Oklahoma  
Norman, Oklahoma  
27-30 U. S. Chamber of Commerce  
Washington, D. C.

### MAY

- May 4-6 A. G. A. Natural Gas Convention  
New Orleans, La.  
5-7 A. G. A. Distribution Conference  
New Orleans, La.

- 11-12 Indiana Gas Association  
Indianapolis, Ind.  
11-15 National Fire Protection Association  
Atlantic City, N. J.  
25-27 A. G. A. Production and Chemical Conference  
New York, N. Y.

### JUNE

- June 4-5 Canadian Gas Association  
Windsor Hotel, Montreal  
5 American Management Association  
Pennsylvania Hotel, New York, N. Y.  
8-11 American Society of Mechanical Engineers Semi-Annual Meeting  
Cleveland, Ohio  
22-26 American Society for Testing Materials Annual Meeting  
Chalfonte-Haddon Hall, Atlantic City, N. J.

### SEPTEMBER

- Sept. 28 Pacific Coast Gas Association  
San Francisco, Calif.  
Sept. 29, 30, American Gas Association  
Oct. 1 Annual Meeting  
San Francisco, Calif.

### OCTOBER

- Oct. 5-9 National Safety Congress and Exposition  
Chicago, Ill.

### NOVEMBER

- Nov. 4-7 American Trade Association Executives  
The Homestead, Hot Springs, Va.  
17-22 National Chemical Exposition and National Industrial Chemical Conference  
Stevens Hotel, Chicago, Ill.





# Residential SECTION

E. J. BOYER, *Chairman*  
B. A. SEIPLE, *Vice-Chairman*  
J. W. WEST, JR., *Secretary*

## Home Service In Wartime Can Render Invaluable Aid To Nation\*

### Home Service in the Emergency

By W. E. BOLTE

*Manager, New Business Department,  
The Brooklyn Union Gas Company  
Brooklyn, N. Y.*

MY feeling with regard to "Home Service in the Emergency" is that the value of Home Service to the industry can be greater than ever before. I believe that there is an unprecedented demand on the part of our customers for nutritional information and for aid in planning wholesome, attractive meals that are geared to economy in the face of rising food costs. Efforts of our Home Service Division will be directed toward meeting this demand. We believe that as a result, we shall insure good customer relations and maintain and perhaps increase our cooking load, at the same time keeping alive in the minds of our customers the desire for modern gas equipment even though for a period it may be impossible to obtain appliances.

In general, we plan to extend and increase our demonstration work, with emphasis placed as much on cooking technique as on appliance promotion, and we are developing additional channels for recipe distribution. Specifically, we anticipate the following activities for 1942:

#### A. Cooperation with official defense agencies:

In allocating our time to this phase of our activities, we plan to give five six-session courses for about four organizations. At least two of them will be planned for relief or slightly higher income levels.

- I. The New York City Nutrition Committee, which serves as a clearing house for organizations requesting nutritional demonstrations and of which one of our staff is a member, has drafted a demonstration plan to be used by all volunteers. We are conducting the first series sponsored by this committee, and will repeat it in another section of our territory.

\* A continuation of Hall M. Henry's report on Home Service which begins on page 50.

- II. The New York City Board of Health has requested a course of low-cost demonstrations for low-income groups. We have conducted one and will repeat it in another territory.
- III. The Defense Council is not yet organized, but we are prepared to comply with requests for assistance if we receive them.
- IV. The Civilian Defense Committee has sent a general request for cooperation to the industry, but we have received none as yet.

#### B. General plan of activities other than for official defense agencies:

- I. An increasing number of demonstrations of all types is being given as a result of sharply increased demand. All these demonstrations feature economical recipes. Increased emphasis is being placed on cookery technique, with lessened emphasis on appliance promotion; nevertheless CP ranges and refrigerators will continue to be stressed.

Types of demonstrations include:

- a. Demonstrations for the general public.
- b. Demonstrations for one-family home owners, since they are future prospects for appliances and present prospects for load building.
- c. Evening classes for business women.
- d. Evening classes for men.
- e. More neighborhood theatre cooking schools are being given than before.
- II. We plan to increase the number of skits and demonstrations for organized groups of both men and women.
- III. We are continuing individual instruction classes for brides.
- IV. Our home call group will continue their activities.
- V. We plan to give our salesmen enough training in cookery technique to enable them to discuss simple cookery problems during calls on owners of CP ranges. They will thereby continue their friendly relationship with customers and promote good will between customers and Company.

## How Home Service Can Best Function in 1942

By LYDA FLANDERS

*Home Service Director, Worcester Gas  
Light Company, Worcester, Mass.*

### Building up Better Public Relations

I BELIEVE Home Service should be aware of the keen interest an awakened public is taking in the subject of better National Nutrition. The woman in the home is anxious to make her contribution to this program for better health through better utilization of food. She hears about it on the radio, reads about it in the newspapers, sees whole pages of her favorite woman's magazine devoted to the subject. She may be baffled and con-

fused by the vast amount of information on the subject. Paul McNutt says, "good nutrition means good food and plenty of it." I believe we can well bear this statement in mind and capitalize in several ways on the fact that the home-maker associates our department with food.

- (a) We can prepare non-technical material in a simple form to give to home-makers, like the three Golden Rules of Nutrition by the Woman's Emergency Committee which is choosing foods, supplemented by three Golden Rules of Cooking—taking up top stove, oven and refrigerator.
- (b) Set up exhibits on our sales floor and windows—perhaps we would

make a series that industry might like to borrow.

- (c) Plan cooking classes that will enable her to choose food wisely, prepare it carefully and store it safely.
- (d) Give Red Cross nutrition classes, serve on nutrition committees in various organizations—Girl and Boy Scouts, Camp Fire, Parent Teacher's Association, etc. A great deal of time and money has been spent by our companies in the past to educate our customers to turn to the Home Service Department for helpful information on homemaking subjects, particularly those relating to food. Now is a most opportune time to capitalize on this situation and to broaden the groups that have not been interested in cooking as such, but are now enlisting in various groups under the banner of national nutrition. We should lead in nutrition work, we should know where mass feeding is to be taught, should know the equipment they are to use, see that the equipment is in the most usable condition, and check that both we and the other workers know how best to use it.
- (e) Volunteer our services and the facilities of the gas company to promote better public relations. Know the community better and have them know

us better by working together in a common cause.

#### Increasing the Use of Gas Through Existing Gas Appliances

- (a) House to house calls to put all gas equipment in best possible order and show users how best to utilize it.
- (b) Teach women that home prepared food costs less and contains better food values, if properly prepared. Think what a load builder a good home cooked breakfast in every home in the country would mean. Our own employees should know and believe in this program.
- (c) Teach women what slow cooking does for cheap cuts of meats, and their nutritional values.

#### Building for the Future of the Gas Business

- (a) This a golden opportunity to strengthen our position with old customers. The public confidence that could be built by the preceding outline would be reflected in the future. Kitchen doors are open to us now that have been closed through lack of interest for many years. The efforts that we make now to keep our old customers satisfied with and aware of the advantages of gas should pay dividends in the future.

## Home Service and National Defense

By ROY E. WRIGHT

*Negea Service Corporation,  
Cambridge, Mass.*

**T**HE Home Service Departments of the gas companies have the greatest opportunity for service to their country, to their company, and to themselves since its existence. We are at war. The most important job we have to do is to win that war at any cost or sacrifice. Modern wars are not won alone at the front line or in the air or on the battleship. Defense production, morale, and national health in modern warfare are just as important as service at the front.

Defense production and national morale depend to a large extent on national health. That is why the authorities at Washington put special emphasis on national health. That is why the Home Service Department can be of such tremendous service to its country. It should take every step possible to cooperate and coordinate its efforts with the national agencies to the furtherance of the health of the people of this country.

The gas company through the efforts of its Home Service Department has much that it can contribute to the national cause. If it plays its part and contributes its share to the health of the nation, it will receive

its just reward by public recognition of its benefits to the community which will indirectly enhance its public relations with its customers. That is how the Home Service Department can render a real service to its company.

There has always been a question in the minds of the executives of the gas company as to the true value of Home Service. There has been a question in the minds of many executives whether they receive a reasonable return on the money spent for home service. Through cooperation with the national health program, the Home Service Department will have an opportunity to place a tangible value on its efforts which no one can deny. Here is a chance for home service to show a definite return to its management which can easily outweigh the cost. That is how home service can be of real value to itself.

How can the program be accomplished? There are many possible ways. The important question is how to reach the greatest number of people in the least amount of time. I am listing some suggestions that might be helpful:

1. Design a simple concise pamphlet which everyone can read and understand, pointing out the rules that lead to and preserve good health for the whole family.
2. In cooperation with the local newspaper,

advertise and put on a National Health Cooking Show which will teach the audience the simple rules of selection, storage, preparation, cooking and preservation of foods in the most economical way that will give the family the necessary daily vitamins and minerals, reduce the leak in the market basket, and save on the family food budget. In this cooking show, pass out your health pamphlet, and explain to your audience that a representative of the gas company will probably call on them at a later date to further explain and help them. Explain at this meeting how to get the best out of a good gas range and out of a poor gas range. Explain at this meeting how the man of the house can recondition his gas range.

3. Follow one or two of these big cooking shows with smaller community shows or group shows for churches, lodges, racial groups, and clubs following out the ideas outlined at the big food show.
4. Train the sales personnel so that they will know this health vitamin story in such a manner that the pamphlets which we designed will help the customer.
5. Train the Sales Department how to make simple adjustments and clean the old gas ranges.
6. Under the supervision of the Home Service Department send the salesman to contact the customer armed with the designed health pamphlets. Have him tell the health story. Have him tell how the gas range can be used to save the vitamins and minerals for the family health. Have him tell how the customer, through better purchases and more cooking in the home, can reduce the family food budget. Have him show the customer how to clean the range and keep it in first class condition. Have him make any simple adjustments on the gas range in the presence of the customer.
7. Check the customer's consumption before and after these calls to measure the effectiveness of the calls.
8. Be continually educating the salesman in these duties and make him give periodical demonstrations under the direction of the Home Service Department.

It is very possible that we soon may run out of gas appliances. A gas load or a gas company never stands still. It either goes up or down. It is the job of the New Business Department to keep it on the upward trend. When this time arrives it seems to me that this can be accomplished only through the organization and training of the New Business Department by the Home Service Department with satisfactory results. It is a big job. There will be many obstacles, but it can be done. It is a challenge to the Home Service Department. It is a great opportunity for the Home Service Department. Will they meet the challenge and make the best of their opportunity?

## Gas Air Conditioning Symposium Studies Industry Problems



John K. Knighton

January 14-16.

The object of the symposium was to bring together the various specialists attending so as to make available to the industry as a whole the cumulative experience of these utility engineers as a practical means of finding answers to problems pertaining to air conditioning applications and installations.

Prepared addresses and open-forum discussions principally concerned conditions and factors involved in air conditioning applications. Much emphasis was given to ways and means of revising previously made plans and methods of operation to conform with war-time complexities. Many of the speakers pointed out the need for adequate planning and preparation now so that the industry would be ready for the post-war period.

Among the pertinent phases on which attention was focussed were proven cost-cut-

**R**EPRESENTATIVES of utility companies from every section of the United States participated in a three-day symposium on air conditioning engineering, in collaboration with the Gas Air Conditioning Division of Servel, Inc., held at the McCurdy Hotel, in Evansville, Ind., Jan-

uary 14-16. The object of the symposium was to bring together the various specialists attending so as to make available to the industry as a whole the cumulative experience of these utility engineers as a practical means of finding answers to problems pertaining to air conditioning applications and installations.

At the close of the symposium, it was decided that further investigation of problems discussed by the utility representatives would be immediately referred to interested industry committees for additional analysis.

In connection with the symposium, the American Gas Association's Joint Committee on Summer Air Conditioning and the Technical Advisory Committee on Gas Summer Air Conditioning met with C. E. May as chairman.

John K. Knighton, manager of Servel's Gas Air Conditioning Division, acted as chairman of the symposium.

Speakers at the meeting included: Louis Ruthenburg, president of Servel, Inc.; Leon Ourusoff, Washington (D. C.) Gas Light Co.; B. A. Johnson, Peoples Gas Light and Coke Co., Chicago; W. F. Friend, A. W. Lundstrom, and A. E. Vroome, all of Ebasco Services, Inc., New York City; G. E. May, New Orleans (La.) Public Service, Inc.; C. A. McKinney, United Gas Corp., Houston, Texas; L. Bert Nye, Jr., Washington (D. C.) Gas Light Co.; S. S. Bailey, Houston (Texas) Natural Gas Co.; George S. Jones, Jr., vice-president and general sales manager, Servel, Inc.; and Dr. William R. Hainsworth, vice-president in charge of engineering, Servel, Inc.



In the far west where CP stands for "Cow Puncher" as well as "Certified Performance," residential sales manager C. W. Steele of Portland (Ore.) Gas & Coke Company pins the Ranger emblem on Ralph Irwin of the Oregon City district and congratulates him on his "plain and fancy ropin'" of CP sales.

## Mid-West Regional Conference Cancelled

**A**S a result of conditions in the durable goods field brought on by the national war-time production program, the Mid-West Regional Gas Sales Council on January 27 decided to cancel the Mid-West Regional Gas Sales Conference originally scheduled to be held in Chicago on February 23 and 24.

Instead, to aid sales executives and sales managers in meeting today's conditions in the best possible manner by full interchange of ideas and experiences, a Round Table Forum for these groups is now being planned to be held in Chicago somewhat later, in all probability during the month of March.

## Heads Defense Drive

**B**ERNARD T. FRANCK, vice-president of the Milwaukee Gas Light Company, has been named executive chairman of Milwaukee County's Defense Bond and Savings Stamp drive.

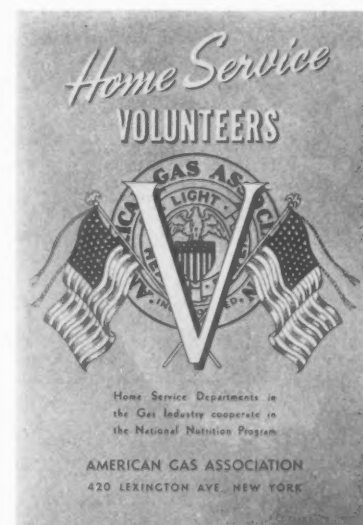
## Promotional Bulletin Being Distributed

**T**HE report of the Special Promotional Exhibits and Activities Committee of the A. G. A. Residential Section has been published and is now available to the gas industry.

This attractive booklet contains a group of special promotional activities undertaken during the past year by gas companies and gas appliance manufacturers in various parts of the country featuring such activities as home shows, cooking schools and unique promotional programs.

It is available at 20¢ per copy from the American Gas Association, 420 Lexington Ave., New York, N. Y.

## "Home Service Volunteers"



**A** NEW Bulletin, "Home Service Volunteers," reporting on the activities of home service departments of the gas industry in the National Nutrition Program, has just been issued by the American Gas Association. Prepared by the Home Service Committee, Helen Smith, Rochester Gas & Electric Corp., chairman, and set up by Ruth B. Soule, The Brooklyn Union Gas Company, chairman of the Nutrition Subcommittee, this 24-page well-illustrated booklet paints an illuminating picture of the part home service departments are playing in the nutrition and civilian defense activities of local communities.

Based on the returns of a three-part-questionnaire, the report makes it evident that home service is keenly aware of its obligations and opportunities and has fully volunteered in the national defense program. This timely material is of interest to gas companies, community nutrition leaders and home economics groups.

Copies may be secured from the American Gas Association, 420 Lexington Ave., New York, N. Y., at 15¢ per copy.



# Industrial & Commercial Gas SECTION

GEORGE F. B. OWENS, *Chairman*  
B. H. GARDNER, *Vice-Chairman*  
EUGENE D. MILENER, *Secretary*

## Opportunities I See for Selling Commercial Gas

IN the later part of the 1941 football season, our home team, University of Miami, seemed to slow down a bit. So one bright evening, Coach Harding called the boys together for a pep talk that produced results. Among other things, he made this statement:

*"Boys, you can't lay back and wait for the breaks to come to you; you've got to go out there and make them."*

This statement also applies to the development of profitable commercial gas revenues. While today we are receiving some breaks we must be able to recognize them in their true light if we are to continue to develop increases in net in years to come.

The breaks I refer to are the more or less temporary loads from the many training camps and defense industries throughout the country. And we should be proud that gas utilities are ready for national defense. But you know and I know that these loads will not continue beyond the emergency.

### Make Your Own Breaks

Here is the point I wish to make. Opportunities for selling commercial gas must be created—created through market research and planned sales programs. I emphasize the word "planned" because any successful sales operation must have a beginning and an end. It must have a revenue objective. It must be flexible—and, above all, it must be continuous. Lasting sales results cannot be secured from spasmodic efforts.

Let me illustrate for you a planned commercial sales activity that produced real benefits for both the customer and the company. We will call this illustration a "case study." From 1934 through 1938—a period of four years—commercial revenues in our town showed an increase of 15 per cent but this was not enough to offset a steady increase in operating expenses and taxes; frankly, net was suffering, so it was decided to make a detailed sales study to determine three things:

1. What opportunities existed for selling commercial gas.
2. If more gas could be sold at a profit, were plant, transmission and distribution facilities adequate.
3. If commercial rates could meet competition.

Address before A. G. A. Annual Meeting, Atlantic City, N. J., Oct. 20-22, 1941.

By O. F. KEUNE

*Gas Sales Manager, Florida Power & Light Company, Miami, Florida*

To determine sales opportunities, a complete survey of all commercial establishments on the mains, whether present gas users or not, was necessary. Such market surveys must be based on facts. FACTS are the basis for formulating sound sales programs.

In this case study, over 4,000 surveys were made. Each of these was a specific, individual survey made by well-trained service salesmen. The survey data were reviewed by the Engineering Department to determine if the potential load could be served without a large capital expenditure. They concluded it could. Next, the Rate Department made a study of existing rates, current competition and the potential market. They concluded (as usual) that rates were right and no downward revision was necessary.

So far, the sales study told us:

- a. We had a market
- b. We had capacity
- c. We had competition (mostly fuel oil—some wood and tank gas)
- d. We had competitive rates.

But we needed something; we needed more selling. So here's where the Sales Department took over and outlined a plan to secure the potential business. The plan was submitted to our management for approval. Management approved the plan—which called for a considerable increase in sales costs. Why? Simply because past experience indicated that to secure lasting commercial revenues, a planned program must be followed—day to day and week to week—starts and spurts could not get the answer. They are both depressing and expensive.

Now before we could prepare a sales program, we had to have a formula. For example, in producing gas, we know that certain definite factors will produce a certain quality of gas. Well, the same thing holds true in preparing a sales program. In our case ten basic sales principles marked the road to opportunity—and here they are:

### No. 1—"Stay Out of the Red"

Our market study told us that our potential business more than equalled our present revenue. No one believed it was there until the market survey was made. The next step was to prepare a new business budget that took into consideration load

mortality, and from this revenue budget covering the period 1939 through 1942.

Many sales factors were studied before we could all agree on the objectives. For instance, certain prohibitive ordinances presented sales resistance. Cost of service and fuel lines presented sales resistance.

Finally a decision was reached. The four-year revenue objective was set at a 70 per cent increase—certainly a big order and a real challenge to the Sales Department since, during the previous four years, the increase had been only 15 per cent.

So, Step No. 1 in a planned commercial sales program is—

### BASE REVENUE OBJECTIVES ON NEEDED REVENUE

### No. 2—"Let Everybody Help"

Our whole organization was willing and ready to help with our commercial sales problems, once they knew what our sales problems were. Here's the way we did it. We prepared a written outline of our objectives; we outlined the Sales Department's part, the Service Department's part, and ways in which all employees could assist. We found employees just as anxious to tip a commercial salesman off on a battery of ranges, a steam table or coffee urn as they were to turn in leads for a "CP" range or a gas refrigerator or an automatic water heater.

And besides letting your own organization know what the Sales Department has to do, a written program will—

- a) Serve as a chart to sales supervisors in reaching revenue goals and controlling expenses. It's as necessary as a compass to a ship's captain.
- b) Give you factual data on which to plan future programs that will be more effective.
- c) Avoid detours from the set program which cost money.
- d) Keep executives and management informed as to progress.
- e) Enable you to sell your sales allies on the fact that you are developing an active market for gas equipment.

So, Step No. 2 in a planned commercial sales program is—

### PREPARE A WRITTEN SALES PROGRAM

### No. 3—"Sell Customers What They Need"

After examining each survey, we know the greatest need of each individual pros-



pect. In the majority of cases, it was gas cooking. And to sell them on gas cooking, we had to sell the *advantages* of gas. As far as fuel costs go, oil was certainly cheaper than gas. But the advantages of gas over oil are many; they were written down and evaluated in dollars and cents. For instance:

We sold savings in meat shrinkage with insulated and temperature controlled cooking and more uniform products—real dollar and cents savings that could be had with utility gas service.

We sold cooler kitchens—better health records for kitchen employees and lower initial cost and lower operating cost of air conditioning installations—real dollar and cents savings that could be had with utility gas service. There are many real dollar and cents advantages that your commercial customer will evaluate for you if given the opportunity.

So, Step No. 3 in a planned commercial sales program is—

#### SELECT MOST NEEDED SERVICE FOR EMPHASIS

#### No. 4—"Let Customers Know You've Got Something"

You cannot possibly keep the advantages of commercial gas a secret and expect to sell it.

We used effective and attractive commercial advertising such as Fenton-Kelsey's "Cooking for Profit" and "Baking for Profit" to tell our story to our customers. One feature they offer of "local color" is securing stories of successful hotel and restaurant operators who use gas. And do commercial customers like it? You know, the sweetest word in the world is your own name, and the most beautiful picture is that picture of yourself or your establishment, and so with our customers, they like this type of national publicity.

Yes, advertising costs money. In our case, we spent 6/10 of one per cent of our commercial revenue on commercial advertising—and it pays.

Now as to company promotion. Commercial sales campaigns are excellent sales stimulators, with cash prizes as special awards for reaching percentages over set quotas. You may think commercial salesmen are above campaigns—that they don't like them. Well, just try it once. We ran three campaigns a year of three months' duration each, and they liked it.

So, Step No. 4 in a planned commercial sales program is—

#### USE AMPLE ADVERTISING AND SALES PROMOTION

#### No. 5—"Be Proud"

When your golf score is in the low 80's, are you proud? Why certainly you are, and you will show the old score card to the whole office force before 10 o'clock the next morning. When a new restaurant or hotel kitchen is installed in our town, we're as proud as shooting in the low 80's.

—In many cases, we had local newspapers take a shot of such new installations. It makes a darn good modernization story for the paper.

—We tied in with the local Restaurant and Hotel Associations. They welcomed our interest and active support. I recall a restaurant show in our town in 1937 when only oil cooking and baking equipment was displayed. At the same show in 1941, only gas cooking, baking and water heating equipment was displayed. And by the way, our good friend, Tom Gallagher of Chicago, was the principal speaker on the 1941 restaurant program in our town, and what a swell job he did for us. And Al Pitman was also instrumental in making the '41 show a gas show.

—Gene Milner has helped us plenty with restaurant and hotel exhibits of this kind. He knows the right people who head up the allied industries. Take full advantage of this valuable A. G. A. service.

So, Step No. 5 in a planned commercial sales program is—

#### SECURE ALL POSSIBLE PUBLICITY—NEWSPAPERS—EXHIBITS

#### No. 6—"Be Prepared"

How bad is your bridge score if you don't play for two months? Well, I know how mine is and why: lack of practice, lack of training and it's the same with commercial salesmen. They need new ideas and methods. Let me suggest a few specific mediums that we used:

- Review of your survey sheets
- Study of your local competitive fuel disadvantages
- Study of utility gas advantages
- Use of manufacturers' monthly bulletins—such as Standard Gas publishes and the "Commercial Gas Salesman" magazine
- Public speaking classes conducted by such organizations as the Dale Carnegie Institute. Sales training is valuable because it benefits all three—the customer, company and salesman.

So, Step No. 6 in a planned commercial program is—

#### TRAIN SALES ORGANIZATIONS CONTINUOUSLY

#### No. 7—"Be a Good Neighbor"

The principal reason for Mr. Roosevelt's popularity is his famous fireside chats. He visits and talks with the people frequently. This same thing applies to our commercial customers. They must be frequently reminded of the value and advantages of using utility gas service. So be a good neighbor and keep commercial customers informed.

I know of case after case where a salesman had presented a good, hard hitting, no-denying sales story to the same prospect month after month without apparent results. But when the oil smoke stack

had to be replaced or the fuel pump jammed, the commercial customer remembered him. It's persistent follow-up that makes the breaks.

Ample manpower to cover *all* your customers—large and small—two to three times each year—is of major importance. In our case we have one salesman for each 400 commercial customers. This permits two calls per customer per year. One thing is certain—regardless of how good a salesman is, it will take six to twelve months before you can expect profitable results from his work. Commercial selling takes time and the salesman must first sell himself to his customers to the point that they have confidence in him and will accept his recommendation.

So, Step No. 7 in a planned commercial sales program is—

#### CONTACT ALL PROSPECTS WITH THE SALES STORY TWO OR THREE TIMES EACH YEAR

#### No. 8—"Be Sincere"

If the boss of your company requested a commercial salesman to lay out a gas kitchen for his favorite country club, what would happen? I'll tell you what. Why, each little detail of cost and lay-out would be carefully reviewed by the sales manager, sales supervisor, salesman, the manufacturer's representative and the food service industry's salesman. And why? Because it's for the boss.

Well, our real boss is our *customer*. And before each call, a careful review of past calls and our survey records were made to determine how we could be of further service. If we expect business men to give us valuable time, we must certainly be well prepared to bring them something of advantage, and we must do a creative sales job. Subsidies, such as free piping and the buying of competitive equipment, are not sound sales practices. You must sell the customer on utility gas as a valuable and needed service.

So, Step No. 8 in a planned commercial sales program is—

#### PLAN SALES CALLS CAREFULLY

#### No. 9—"It Takes Teamwork"

You know, the Yankees have a habit of winning American League pennants and World Series. Joe McCarthy, their manager, says it's due to teamwork.

Selling commercial gas takes teamwork with the equipment manufacturers. To illustrate, those of you who heard John Mooney's talk in Atlanta last year can fully realize the work he has done for us in training the food service industry's salesmen in kitchen planning and selling gas. Others have also been very helpful and without them the job would have been much more difficult.

Selling commercial gas takes teamwork with the food service salesmen. Their business is selling equipment. The fuel is of minor importance to them. In our

case, we do not merchandise any commercial equipment, but we sold our customers on the advantages of gas service to the point that it is much easier for our sales allies to sell gas equipment than any other.

Our salesmen are paid a flat salary which is the only method of compensation we know that will secure worthwhile cooperation with food service representatives.

So, Step No. 9 in a planned commercial sales program is—

**SECURE ACTIVE SUPPORT OF  
MANUFACTURERS AND FOOD SERVICE  
INDUSTRY. POINT OUT THEIR  
OPPORTUNITY TO PROFIT**

**No. 10—"Check and Double Check"**

After our sales program was under way, we had to know where we were going if we expected to get there. To illustrate—when you started to Miami on your vacation last summer, it's nine to one it was well planned from beginning to end, including the cost.

In selling, we also must have adequate cost controls. We must keep up with progress of our revenues, sales expenses, salesmen's results and other control factors. It's the Sales Department's responsibility to management to know the answers for all matters of sales operation. In our case, we spent a little over 5 per cent of our yearly commercial revenues for commercial sales expense. As to how much you should spend on sales, this depends on the job to be done.

If you are spending 2 per cent of your revenues and getting the answer—well and good. But if you are spending 2 per cent and holding your own, you can't afford it. It costs money to make money. The level of expense depends on what it takes to get increased net and it may be 3 per cent—5 per cent or 7 per cent.

So, Step No. 10 in a planned sales program is—

**KEEP ADEQUATE RECORDS AND CLOSE  
CONTROL**

These ten principles were our guide to commercial gas sales opportunities.

Now as to results. Revenue objective for the four-year period called for an increase of 70 per cent. In two years, one-half of the four-year objective has been secured.

Our commercial revenues today are 33 per cent of our total business, compared to 13 per cent for the manufactured gas and 10 per cent for the natural gas industry.

Our revenue per customer today...\$238.00  
Manufactured gas industry..... 166.00  
Natural gas industry..... 120.00

This increase does not include one dollar of defense projects of any nature. It was secured from customers on existing mains and NO capital expenditure was necessary. It was secured on rates effective when the program was started.

Here you have the results of a planned commercial sales program.

## Industrial and Commercial Gas Sales Conferences in March



*Carroll B. Mershon*

ity and appliance and equipment men will gather at the William Penn Hotel, Pittsburgh, Pa., on Thursday and Friday, March 12 and 13, to participate in a conference aimed at problems arising from the sale and use of non-residential gas and equipment under war-time conditions.

Gas—in the production of war materials, and in the mass preparation of food for civilian and military needs—will be the theme of the conference. With the largest industrial and commercial gas outputs on record rapidly growing because of the urgent demand for accelerated war-materials production, the increasing responsibilities of gas in the war effort have presented many new problems. These problems will be thoroughly explored.

### **Wide Participation**

Men close to the war-production movement; men handling the industry's problems arising from changing conditions in the food service equipment field; special guest speakers from the outside; prominent executives; industrial and commercial gas men from the field: all will contribute to the program of action, information and results. The Committee on Program and Arrangements has arranged the meeting schedule so as to allow hotel and restaurant men and industrial gas men ample time for specialization and for participation in certain joint activities of importance to all non-residential gas men.

The committee, of which Carroll B. Mershon, The Manufacturers Light & Heat Company, is chairman, announces that the two-day program includes, among others, the following subjects. Getting the Maximum Value from Gas in War Production . . . Industrial and Commercial Gas Equipment in the War Effort . . . Adjusting Commercial Gas Sales Efforts to Meet Today's New Conditions . . . A Front-Line Report on Gas in Canada's War Effort . . . A Clinic on Deep Fat Frying . . . What Can Be Done To Assure the Future of Industrial and Commercial Gas . . . A Clinic on New Industrial Gas Developments Now in the Field . . . A Similar Clinic on New and Improved Gas Equipment . . . Technical and semi-technical papers on various industrial and commercial uses of gas, such as drying, space

heating, baking, water heating, etc. . . . Uses of Gas in Military Establishments . . . Uses of Gas and Gas Equipment in Industrial Cafeterias and Lunchrooms.

Several forums will be held on subjects which have varying angles and which can be treated better thus than by individual papers. Men of acknowledged leadership and inspiration will be the luncheon speakers each day.

The Hotel, Restaurant and Commercial Division and the Industrial Division of the Association of Gas Appliance and Equipment Manufacturers are participating in the conference and are organizing a friendship room, so popular at these conferences in recent years.

Several committees of the Industrial and Commercial Gas Section will meet during the conference. Among them are: the Managing Committee, the Technical Advisory Committee on Summer Air Conditioning; the Food Service Equipment Committee; and the Metal Treating and Melting Committee. The Food Service Equipment Committee will sponsor a special exhibit of up-to-date promotional and technical literature in its field. There will also be a display of commercial and industrial advertising under war conditions.

## Charles L. Gehrlich Is Dead

**C**HARLES L. Gehrlich, vice-president of Gehrlich & Gehrlich, Inc., Woodside, N. Y., died December 24 at the age of 58.

Mr. Gehrlich had been associated with the gas industry since the early 1900's, when he joined his father in the sheet metal and industrial oven business. Since 1934 he had been associated with his brother, William Gehrlich, and nephews, Herman and Charles A. Gehrlich, in the management of Gehrlich & Gehrlich, Inc., industrial gas oven manufacturers. His continued advancement in oven engineering earned him a place as one of the outstanding designers of industrial oven equipment. Most well known of his achievements was the well known D. J. industrial convection heater with its advanced principle of insulation by heat utilization.

Mr. Gehrlich was an active participant in A.G.A. Combined Exhibits at National Metal Expositions and served on several committees of the Industrial and Commercial Gas Section.

## Hulcy Honored

**D.** A. HULCY, president of the Lone Star Gas Company, Dallas, Texas, and director of the American Gas Association, was elected vice-president of the Dallas Chamber of Commerce on December 12.



The U. S. Chamber of Commerce in a letter to executives gives the nod to Industrial and Commercial Gas Section advertising in trade journals in the metals industries. This was cited as an example of the part trade associations can play in national defense.

Brooklyn Union was ready with Industrial Gas Section Chairman Owens on the job as head of their Defense Committee when war came to America.

Wring 'Em Dry—industrial gas war-production articles: Stepping Up Production Pace of Magnesium Castings at Ford, THE IRON AGE, Oct. 2, pp. 32-35; Gas-Fired Furnaces for Heat Treating Shells and Guns, MACHINERY, October, pp. 135-137; Speeding Shipbuilding with Natural Gas Fuel, WESTERN MACHINERY AND STEEL WORLD, November, pp. 556-559; Furnaces for Production Heat Treating, AMERICAN MACHINIST, December 10, pp. 1256.

"Modern bakeries find gas an ideal fuel," said Peter G. Pirrie, BAKERS WEEKLY'S well known expert, in an address before 250 members and guests of the A.S.M.E.

Eclipse reports an order for two 1,000,000 B.t.u. gas-fired McKee Dowtherm Vaporizers (boilers to you) for bodying vegetable oil. That's fine acceptance of a comparatively new application of gas in the chemical industries!

Pitz Foundry is among those that found meeting war production specifications required better cores. Result, a new gas core oven.

Pin a medal for printed promotion on Surface Combustion—for its recent booklet, "The Great American Emergency," showing what industrial gas is doing in heat treating for war production. Good photos, good copy, attractively produced—and they've already had to order reprints.

Airplane factories report 256,400 workers on their payrolls in October, an increase of 141,000 or 120% over a year ago. In addition, it is estimated that more than 70,000 new workers will be needed by these industries by the end of February. Gas is serving most of these war workers in their homes as well as at their work.

Co-ed Special—a restaurant near the University of Minnesota campus features a special co-ed breakfast for 15 cents—orange juice, coffee and two cigarettes. Not much gas consumption there!

Industrial and Commercial gas sales are steadily going up, indicating our increased participation in the war production program. Industrial equipment sales are at a peak.

British use gas in air raid protection—Rochdale firemen have devised a clever method of quickly drying hose between calls to put out fires from incendiary bombs. Details on request.

Carl Mann's "Short Cycle Curing of Industrial Finishes" is still being reprinted by the trade journals. The paper certainly has gotten a wide coverage since it was presented before industrial gas men.

Sanitize for health says the Volume Water Heating Committee. Cooperate, by showing local drinking and eating places what gas-heated hot water can do in preventing epidemics, particularly important during the war.

Has your company arranged for full representation of industrial and commercial men at the A.G.A. Industrial and Commercial Gas Sales Conference, Thursday and Friday, March 12 and 13, in Pittsburgh?

## INDUSTRIAL AND COMMERCIAL NATIONAL GAS ADVERTISING FOR FEBRUARY

The National Advertising Committee of the Industrial and Commercial Gas Section, J. P. Leinroth, chairman, and F. B. Jones, vice-chairman, announces that full-page advertisements will appear in the trade and business magazines listed below during the month of February. These advertisements, which will appear in 16 publications reaching a total audience of 288,587, are prepared in co-operation with the Committee on National Advertising as a part of the Association's national advertising campaign.

### Metals Industry

THE IRON AGE (Feb. 12)—Business Week advertisement entitled: "The reason we can help you today?—we got ready yesterday," plus tie-in advertisement on GAS applications in the Metals Field.

STEEL (Feb. 23)

METAL PROGRESS

INDUSTRIAL HEATING

### Baking Industry

BAKERS' WEEKLY (Feb. 14)—"Aye, aye, Sir"—Naval Training Station, San Diego, Installs GAS for Baking.

### Ceramic Industry

CERAMIC INDUSTRY—Business Week advertisement entitled "The reason we can help you today?—we got ready yesterday," plus tie-in advertisement on GAS applications in the Ceramic Industry.

### Hotel and Restaurant Field

HOTEL MANAGEMENT—Yes Sir, it PAYS to cook with GAS.

CHAIN STORE AGE (Fountain and Restaurant Section)—Bring in more customers with attractive GAS broiled foods.



A. GORDON KING, *Secretary*

American Gas *Association* MONTHLY



closed, the level is raised by opening the air valve, allowing the air pressure to force the oil out of the inner tank until the required height is reached. The oil is forced from the inner tank through the one inch slit opening as shown. This level will be maintained as long as the valve is closed except for the amount of oil used up in the process. If it is necessary to lower the level for any reason, opening the bleeder valve will allow the pressure within the inner tank to be relieved, causing it to refill.

#### Less Oil Wasted

While oiling meters, the only attention the tank needs is the checking of the level as the oil is used; the operator keeps the meters in the oil the required time, drains them completely, and then wipes the cases clean before passing them on for further repair. The amount of oil wasted by wiping off the case is very little, and much less than the waste experienced by other methods. We have tried almost all the known methods, and this one affords the most efficient use of the oil.

The size and arrangement are those adopted to fill our particular needs. The "well" part of the tank provided for the oiling of large meters makes it possible for us to oil 30- and 60-light meters by this method. This means that the tank will hold a rather large amount of oil, but as none of it is wasted, it has the advantage of giving a very stable temperature control. Excluding the oiling of large meters by this method the width and length of outer tank could be made slightly larger than the inner tank dimensions. This would require a considerably less amount of oil, as the oiling space might be designed to fit the needs of the particular shop.

This tank when completely filled contains 300 gallons of oil. About 65 gallons of oil can be used before the inner tank blows the seal showing the limit of the control has been reached. Approximately 70 meters (5-light A) can be oiled per



Fig. 2. Top view of tank showing one cover closed and draining tray placed over large meter well

gallon which would mean that 4500 meters could be oiled before a refill was necessary.

One possible objection is the consideration that foreign substances or condensates from the meters might so contaminate the oil as to make it impossible to just "add oil" indefinitely. In our case the contaminating matter exists in relatively small quantities. Should light oils be present in the condensate it would be necessary to remove this oil from the dressing at intervals by heating or other methods. In some instances it would become necessary to discard the dressing after it was no longer suitable to give the required protection.

To clean the tank a drain is provided in the bottom with a nipple inserted so that the tank will not drain below the level of the settled out impurities. The nipple is then removed and the heavier sludge is drained off. This small amount of sludge can be filtered out to regain the oil but the amount involved is not worth while. The air line union between the inner and outer tanks can be broken and the bolts removed from the brackets to free the inner tank. The inner tank can be completely removed,



Fig. 3. Top view of tank showing meters being oiled in tank, draining above and in draining tray at back

and as it does not have a bottom it is very easily cleaned. Our shop oils about 8500 meters a year, and only one cleaning per year has been found necessary.

#### Tank Specifications

**OUTER TANK:** 3' x 3' x 7' long, 3/16 black iron, all welded seams braced by 1 1/4" angle iron. The depth of 3' is necessary because of the drain tray with rollers that must clear a 60-light meter.

**INNER TANK:** 4'8" long, 2'4" wide, 1'0" high; with top, sides, and no bottom (Outer tank serves as bottom). One side is 1" shorter allowing a slit opening which serves to permit the passage of oil from the inner to outer tank when the air valve is opened. Four brackets hold the inner tank in place with relation to the outer tank. The whole inner tank can be easily removed for cleaning by removing the bolts from the brackets, and breaking the union in the air line between the inner and outer tank.

**PIPE STAND:** The stand that supports the



Fig. 4. End view of tank showing gas and air connections

tank is made of pipe, and must be strong enough to support the weight of the tank filled with oil. The whole frame was welded and provided with screw flange legs to true it squarely to the floor. The height of the frame depends on the size and rating of the burners which determine the amount of combustion space required. Flame deflection plates must also be provided to avoid hot spots and possible carbonization of the oil.

**PIPE BURNERS:** The size of the burners to be installed depends on the rate of recovery required when the tank is to be heated from room temperature. After the volume of oil is heated the heat control will keep the burners burning very low, and many times only the pilot is enough to maintain the heat. Two stands support the burners, one at each end, and also the flame deflection plates that are properly braced with angle iron to prevent their eventual buckling. Secondary air is admitted at the front and all along the bottom of the tank as the insulation is brought down to an angle iron about an inch from the floor.

**DRAINING TRAY:** A black iron drain tray 3' x 2' x 3" deep fitted with rollers is used above the tank. A grill is used to help drain the meters on the tray and keep them off the bottom. Oil from the meters drains to the sides of the tray, where slits have been provided to allow the oil to drain into the runners, which in turn drain to the "well" for large meters. When only small meters are being oiled this tray is placed over the large meter well and a pipe frame is added that supports the meters in an inclined position over the tank while they are draining. After draining on the pipe rack the meters are put on the draining tray ready for the cases to be wiped free of oil.

**TANK COVERS:** The outer tank is fitted

(Continued on page 80)



## Automatic Ignition

By R. M. CONNER

*Director, A. G. A. Testing Laboratories*

- Mr. Conner's comprehensive discussion of automatic ignition is being published in two parts. Part I, in this issue, covers two types of ignition devices, namely, cold catalysts and constantly burning gas pilots.
- Part II, which will appear in the March issue of the A. G. A. MONTHLY, is devoted entirely to electrical ignition devices.

### PART I

AUTOMATIC control which has permitted our industry to provide consumer service in keeping with modern concepts of convenience has been based primarily on automatic ignition of gas. Whether we have in mind an automatic central house heating appliance which provides comfort heating during the winter months without any attention whatsoever by the consumer, or an automatic type of gas water heater which delivers a supply of water at a predetermined temperature 365 days in the year whenever the tap is turned, or an instantaneous source of heat by turning on a top burner valve of a domestic gas range, the basic fundamentals of the operation involved are the effective and consistent production of energy in the form of heat derived from our modern servant, city gas.

Three distinct types of automatic ignition devices have been successfully employed: (1) standing or constant burning gas pilots, (2) electrical devices, and (3) cold catalysts. The first two types are commonly used in this country and will be fully discussed herein. As electrical means are generally employed to ignite a gas pilot flame which in turn actuates a safety device and provides ignition means for the main gas supply, a discussion of the first category is most important and will be taken up in the first article of this series. Direct ignition of the main gas supply may be accomplished providing that adequate safety control is affected.

A third and basically different type of automatic igniting means is the cold catalyst. Cold catalysts for manual and automatic ignition of gas have received considerable attention in England and Continental Europe. Developments there have centered largely around the use of finely divided platinum mixed with a porous ceramic

material. The significance of "cold" in connection with a platinum catalyst is that the platinum does not have to be energized electrically or externally heated to provide ignition, since, in a finely divided state, the selective absorption of hydrogen will raise the temperature to the required ignition point of certain city gases. In further differentiation of this term, it may be noted that a platinum wire must be energized electrically to a temperature of approximately 575° F. before it exerts any catalytic effect on hydrogen or hydrocarbons. The catalytic effect of heated platinum wire can be observed in hot-wire coil igniters.

It is important to note that as a result of experiments carried on abroad, it may be concluded that catalysts will not work with natural gas. Therefore, the field of use of these materials for automatic ignition purposes will be confined to manufactured gases, preferably those having a free hydrogen content of approximately 50% or greater. Cold catalysts, however, would seem to be particularly desirable in this field for obvious reasons. As early as 1937, 4000 gas heaters on the lines of the London Gas Light and Coke Company were operated with cold catalysts and from the experience gained at that time it was indicated that a minimum of one year and probably two years of life, or longer, might be expected. It is felt that more attention to this medium for use as a pilot igniter in conjunction with conventional safety controls is warranted.

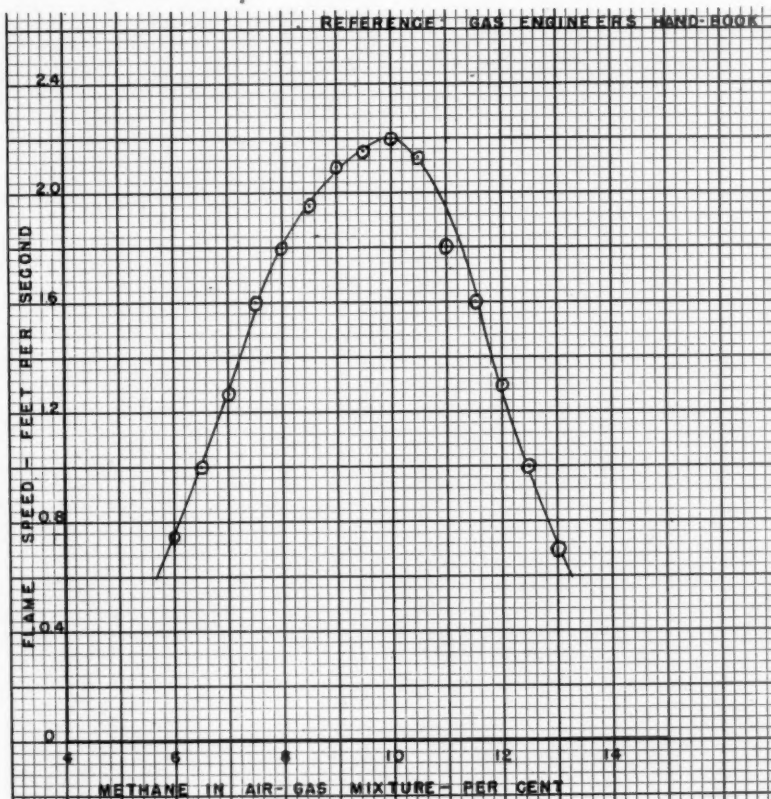


Fig. 1. Flame speed in mixtures of methane and air observed in 1-inch diameter tubes

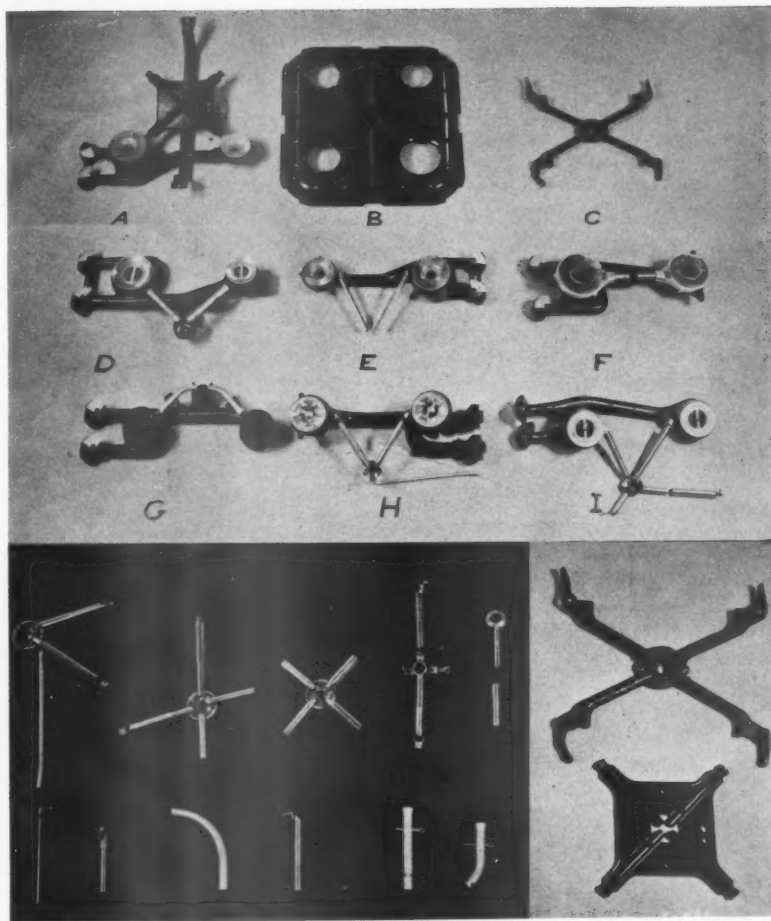


Fig. 2. Typical burner assemblies with flash tubes of contemporary design

#### Automatic Ignition Means Incorporating Constantly Burning Gas Pilots

Several methods are employed in the automatic ignition of main burners by standing or constantly burning pilots. The pilot may be located adjacent to the main burner so that gas or air-gas mixtures issuing from the burner ports may come in contact with the pilot flame thereby effecting ignition. A second arrangement is the use of a so-called "runner arm" which is located between the pilot and main burner. By this method ignition is accomplished by flame travel across ports or slots of the runner arm from the pilot to the main burner. In other adaptations, a flash tube through which an air-gas mixture from the burner head flows and emerges from the end adjacent to the standing pilot may be employed. Under proper conditions of design, this mixture ignites from the standing pilot and a flame from it travels backward igniting the gas at the main burner.

From this classification, the importance of pilot location is self-evident. One of the first prerequisites is that its location in conjunction with the pilot design shall

be such as to provide positive ignition at all times. In addition, adequate venting must be provided, particularly for those appliances having revertible flues where a tendency may exist for the pilot flames to be smothered during the first few minutes of a heating cycle. This difficulty is generally overcome after an effective draft has been established. However, before this occurs, the pilot flame may be extinguished.

Where safety pilots or automatic pilots are employed to prevent escape of unburned gas in event the pilot flame is extinguished, effective ignition should result with the pilot flame turned down to a point at which just sufficient heat is provided the actuating element of the safety pilot to hold it in an open position. In addition, design and location of a pilot burner in conjunction with an automatic pilot must also be governed by consideration of reverse action of the thermostatic element of the safety pilot. With differential type safety elements, including the thermocouple and mono-metal principles, conditions may be created whereby the entire element becomes heated to a point that a sufficient differential in temperature does

not exist to hold the safety device in operation. These facts are significant inasmuch as they illustrate that pilot applications must of necessity be factory engineered and not subsequently disturbed without comprehensive tests to insure effective ignition.

Use of runner arms in conjunction with standing pilots for automatic ignition removes the pilot from the main burner but generally involves one additional problem, namely, that of providing satisfactory flame travel across the runner arm either by close spacing of drilled ports or use of a slotted port. In either case, protection against stoppage is vitally essential. The preferred application of runner arms is to have the standing pilot adjacent to the burner to be lighted, with the runner arm serving the purpose of carrying a flame back to the actuating element of the safety device. With such an arrangement, stoppage of the runner arm ports or failure of the flame to travel satisfactorily will not result in a hazardous condition. On the other hand, if the constant-burning pilot is located in a position remote from the main burner and actuates the safety device, then failure of flame to carry across the runner arm may result in delayed ignition or possibly an explosion.

#### Use of Flash Tubes

The use of flash tubes has found considerable favor for automatic lighting of top range burners, primarily because with such flash tubes one pilot can be employed to light several burners. A number of fundamental considerations must be adhered to in the design of a satisfactory flash tube ignition system. One of the most important of these is that the composition of the air-gas mixture must be within inflammable limits of the gas being consumed. When it is considered that the inflammable limit of certain gases, particularly natural gas, is extremely narrow, it becomes evident that conditions necessary to secure flash-back of gas in a flash tube are difficult to obtain. The apparent speed of flame travel may be defined as the difference between true flame speed and the velocity of mixture through the flash tube, since each travels in opposite directions. Thus, if the mixture flow velocity exceeds the true flame speed, flash-back cannot occur even though the mixture composition maybe within inflammable limits.

Since it is also true that flame speed varies with gas concentrations, as shown in Figure 1, the flash-back range between rich and lean limits of gas concentration becomes increasingly narrow as velocity of mixture flow increases. To obtain prompt ignition by the use of the flash tube method, the tube must be filled with a suitable air-gas mixture as soon as gas begins to issue from the burner ports. The time required to fill the tube may be shortened by increasing velocity of the mixture. Otherwise, the composition of the mixture must be controlled within a narrower range. Although mixture and tube temperatures, as well as turbulence, may also directly in-



fluence flash-back or flame propagation independently of mixture composition or average velocity, these variables unfortunately cannot be readily controlled over a wide range.

A number of investigators have determined the rate of flame propagation, but in all such cases experimental work has apparently been confined to quiescent mixtures. Obviously, such conditions are not applicable to flash tubes, since mixture flow is continuous in a direction opposite to the required direction of flame travel. Accordingly, information contained in literature on limits of inflammability, flame speeds in tubes, mechanisms of flame propagation, and the effect of factors which influence flame propagation such as temperature and turbulence of air-gas mixtures, restrictions in the flame path, and environment surrounding the flame cannot be directly applied to the problems occurring in flash tube operation.

For such reasons also, it is still customary for engineers as well as manufacturers of flash tube lighter equipment to resort from necessity to "cut and try" methods of developing an assembly which, as an integral part of a range top section, will provide satisfactory performance. As evidence of this is the large variety of contemporary flash tube designs shown in Figure 2. It will be noted that a large variety of sizes, shapes and designs are now in use, all of which serve the same purpose on different gas range top section assemblies. Obviously, the principles involved are basic and the various designs represent different adaptations of these same principles.

#### Domestic Range Research

The American Gas Association, through its Committee on Domestic Gas Research, of which R. L. Fletcher is now Chairman, succeeding F. J. Rutledge, has been conducting at its Testing Laboratories, as part of a program of fundamental research on domestic gas ranges, studies of the principles of flash tube lighter design. Already the first phases of these studies have been summarized and published in Bulletin No. 14—"Fundamentals of Automatic Flash Tube Lighter Design." Data presented should not only prove very valuable in replacing previous rule-of-thumb results but should also be found extremely helpful in new design and improvement of existing constructions.

Figure 3, taken from these data shows relationships between natural and gas-air mixtures, mixture flow velocity, and flash-back limits for approximately  $\frac{1}{4}$  and  $\frac{1}{2}$  inch I.D. flash tubes. For each diameter flash tube, a boundary is defined by the two curves, any point within which defines a condition of mixture velocity in the flash tube and air-gas ratio at which flash-back will occur. Outside of this area, flash-back will not take place. It is also interesting to note that a maximum velocity is reached, for each diameter flash tube, at which the gas will not flash back regardless of the composition of the mixture. It may be deduced from these data that the

larger the diameter of the flash tube, the broader will be the limits of air-gas ratio at which flash-back will occur and the higher the mixture velocities which can be tolerated for flash-back. In other words, an increase in the sizes of the flash tube provides more latitude in the flash lighter assembly. Compensating to some extent for this advantage is the fact that the larger tube requires a higher gas rate for a given mixture velocity and air-gas ratio. Further interesting observations may also be made from the curves in Figure 3. For example, maximum effective flame speed for both sizes of flash tubes was found with a mixture containing 9½% natural gas. A number of curves similar to Figure 3 have been developed for other sizes of flash tubes and the principles outlined in the foregoing have been applicable for all results obtained.

It was found that the limits of gas in the air-gas mixture at which flame propagated in combinations of different lengths varied from 5.8% natural gas to 7.05% natural gas on the lean side and 11.0%

natural gas to 14.2% natural gas on the rich side. These data were obtained when the fluent air-gas mixture from the flash tube was lighted by a standing pilot. These inconsistencies in composition were therefore attributed to the inherently erratic nature of the ignition means. Accordingly, investigations were made in which the air-gas mixture was lighted by an electric spark at the outlet of the flash tube. Under this condition of experiment, the rich limits varied only from 11.4% to 12.8% natural gas, thereby indicating a greater agreement. Comparison of these data indicates the influence which the standing pilot and its location in reference to the outlet of the flash tube may exert on ignition characteristics. The foregoing results are mentioned to indicate the type of basic research being conducted on this problem, which should ultimately lead to design and use of flash lighters which will afford positive and consistent ignition under all ordinary conditions of field usage. More complete information may be secured by reference to Bulletin No. 14.

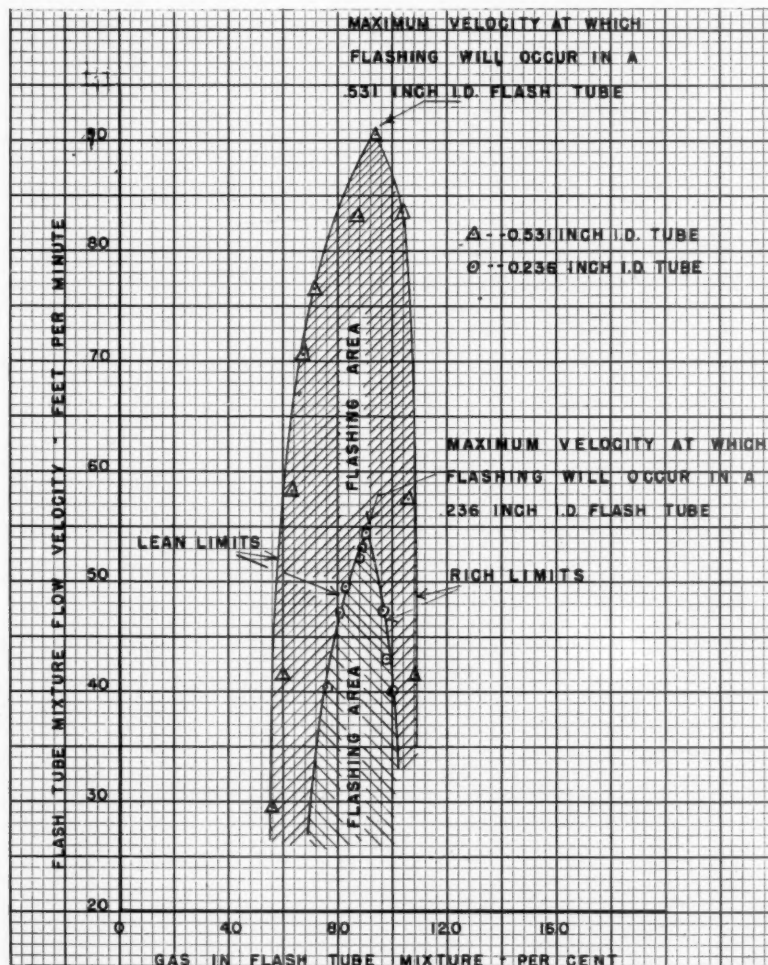


Fig. 3. Natural gas flash back limits in 0.236 and 0.531-inch I.D. tubes



## "U. G. I. Circle" Ends Publication

AFTER twenty-one and a half years of continuous publication, *U. G. I. Circle*, employee magazine published by The United Gas Improvement Company, Philadelphia, suspended publication at the end of 1941. An attractively printed, well-edited magazine, it had long held a high place in its field. Among its editors were William F. O'Donnell, James M. Bennett, C. E. Wetzel, Gordon Jones, and lastly, Sam S. Riggall.

### Research

I define research as an organized campaign against the unknown.—*W. S. Landis.*

## HOW TO DEFEND YOUR PLANT

(Continued from page 49)

bombs. Consideration should be given to the safety afforded by these shelters, to entrances and exits, lighting, heating, and ventilation.

The control of illumination (blackout) should be studied. Means should be developed to control quickly, to any desired degree, all artificial light so that no light will be visible externally during a blackout.

Key men should be stationed in pairs at the various utility controls, such as telephone switchboards, gas, steam, and water controls and boilers. These men must remain at their post during an air raid to handle any emergency.

Because the key men must not be removed from their posts, organized repair crews must be ready to handle any emergency in any particular circuit.

## KNOW YOUR MARKET!

(Continued from page 56)

changes in the size of the family or their living habits and in other cases the change in consumption resulted from a change in appliances used in the home. Of those showing increases in gas usage, approximately 52% explained the increase by changes in family habits, such as increase in the number of persons in the family or fewer vacation periods, approximately 34% by new gas appliances as for example, gas water heaters and refrigerators, and the balance were unable to offer any explanation. Of those whose consumption showed a decrease, approximately 73% explained the decrease by

changes in family habits, such as a decrease in the number of persons in the family or more vacation periods, approximately 18% discontinued the use of some gas appliance, and the balance were unable to offer any explanation.

It is proposed to continue this type of study in other units of the territory in order primarily to account for losses of gas sales in the residential class.

## Conclusion

The type studies outlined above are valuable as they show trends that would prove useful in setting up the future promotional program of the utility. Industrial managers, at present, believe that one means of diverting a post war depression will be the demand put upon industry to supply the things that could not be supplied as a result of the defense program. As proof of this they point to the limited building program together with the reduced allowable production of automobiles and household appliances. In order to obtain our share of this business when it is available, we should be able to answer the following questions regarding the market for gas appliances in our territories.

1. How much of this market do we now serve?
2. How much of this market does each of our competitors serve?
3. What has been the sales progress of our competitors over a period of years?
4. How much of existing competition are we replacing?

Only by constant study of our markets can we judge the progress of our industry, or hope to determine what our situation will be in future competitive markets.

**FOR DEFENSE**



**BUY  
UNITED  
STATES  
SAVINGS  
BONDS  
AND STAMPS**

## Auditoriums Reserved for Defense Work

ALL auditoriums of The Connecticut Light and Power Company have been placed at the disposal of the State Defense Council for emergency use as temporary hospitals or relief stations, it was announced recently by C. L. Campbell, president of the company.

The auditoriums, seating from 75 to 250 persons each, can be quickly converted into emergency relief quarters, Mr. Campbell explained in a letter to Colonel Samuel H. Fisher, Administrator of the State Defense Council. They are located at Waterbury, Naugatuck, Meriden, Norwalk, New Britain, Winsted, Willimantic and Essex.

Ordinarily the rooms are used for cooking demonstrations.

## Blackout Shield for Gas Lights

THE Welsbach Street Lighting Co. of America, Philadelphia, has developed a simple, inexpensive, easily attached blackout shield for use on gas street lights. Normally this will not interfere with the light; but in the event of an air raid alarm it can be quickly dropped so that it will black out both lamp and pilot without extinguishing either. The raising of the shield is equally simple. A photograph of the device appears in the January issue of the *American Gas Journal*.

## Gas Appliance Sales Diverted to Dealers

ON February 15, the Equitable Sales Company, representing the gas and electric utility companies in Pittsburgh, will discontinue the sale of gas and electric appliances to the public, it was announced recently by Joseph McKinley. This action was taken to divert to dealers those appliances which would have been supplied the gas and electric shops of the Equitable Sales Company and the Duquesne Light Company will continue to conduct sales activities in support of dealers, distributors and manufacturers.

## Looking Ahead

AN unusual tribute to the foresight and resourcefulness of the men who planned and participated in the A. G. A. annual meeting last October appeared in the December-January issue of *Magic Chef Magazine*. That issue carried an extensive account of the meeting together with an editorial note to the effect that while it "took place before the Japanese aggression presented the U. S. with new problems, almost everything said at that meeting is still pertinent."

No crystal-gazing, just plain common sense for which gas men are noted was reflected in that program.

## Office of Defense Transportation Established by President

**RECOGNIZING** the importance of a highly organized system of transportation to the nation's defense activities, the President on December 24th by Executive Order established the Office of Defense Transportation and appointed Joseph B. Eastman as the Director. This places the coordination of railroad, motor, inland waterway, pipe line, air transport, and coast-wise and intercoastal shipping under one head.

The Central Motor Transportation Committee under the chairmanship of John L. Rogers, Interstate Commerce Commissioner, will report to Mr. Eastman in the future. This committee was formed in June 1941 to:

- (a) Formulate and execute plans for the efficient and economical use of highways and commercial motor vehicles.
- (b) Cooperate with government agencies and those furnishing or using transportation facilities in promoting the national defense, and to assure sufficiency of commercial motor vehicles to meet the needs of National Security.
- (c) Perform such other duties and functions as the Transportation Commissioner may from time to time assign to it.

To facilitate the work of the central committee, Chairman Rogers has established sixteen regional committees covering the territory corresponding to the sixteen Interstate Commerce Commission districts. Each district director acts as chairman of the regional committee which is composed of members representing different phases of transportation such as the public highways, for-hire trucking, private trucking (this group includes public utilities) and bus operation. The utility representatives of the sixteen districts are as follows:

### Regions

1. J. A. Herlihy, Edison Electric Light Co., Boston.
2. R. H. Clark, Consolidated Edison Co. of New York, Inc., New York.
3. Lynn Edsall,\* Philadelphia Electric Co., Philadelphia.
4. S. G. Page,\* Equitable Auto Co., Pittsburgh.
5. Jean Y. Ray,\* Virginia Electric & Power Co., Richmond.
6. R. Whitfield, Georgia Power Co., Atlanta.
7. F. B. Penick, Southern Bell Telephone and Telegraph Co., Nashville.
8. G. D. Gilbert, Illinois Bell Telephone Co., Chicago.
9. G. E. Loughland, Northern States Power Co., Minneapolis.
10. R. J. Collins, Kansas City Power & Light Co., Kansas City.

\* Member, A. G. A. Committee on Operation of Public Utility Motor Vehicles, Technical Section.

11. S. M. Sharp, Southwestern Gas & Electric Co., Shreveport.
12. Ben Smith, Southwestern Bell Telephone Co., San Antonio.
13. F. T. Parks, Public Service Co. of Colorado, Denver.
14. B. A. Barickman, Mountain States Telephone & Telegraph, Billings.
15. G. H. Keiburtz, Puget Sound Power & Light Co., Seattle.
16. P. H. Ducker, Southern California Edison Co., Los Angeles.

Utility motor transportation officials throughout the United States have been requested to contact their regional representatives who will exchange information on all forms of motor transportation shortages, congestions, delays in shipments, scarcity of parts and the effect of priorities, greater efficiency of operation, and proper maintenance and servicing. At the present time the regional committees, in cooperation with the War Department, are actively assisting in the National Commercial Vehicle Census being conducted by the Public Roads Administration.

### REOILING METER DIAPHRAGMS

(Continued from page 75)

with covers to help retain the heat when no work is being done. The draining tray fits the rest of opening beyond the covers. (See Figure 2)

**OILING OF LARGE METERS:** With the swinging door down (See Figure 1) the depth of the oil is for 30-light meters. When the door is up the meters go to the bottom of the well and this distance is just right for 60-light meters. A chain fall is fixed over the tank for handling all large meters. If larger than a 60-light size the meters are placed on the inner tank. The level is then raised to its maximum position and oil is scooped over the exposed part of the diaphragm till the required penetration is achieved.

**AREA FOR SMALL TIN METERS** (Over inner tank): This area in our tank is 5' x 3' and designed to hold twelve small (5-light or 10-light) meters at one time. These meters may be opened, with the fronts and backs removed, or may have the diaphragms oiled without removing the case covers. This can be accomplished with the fronts and backs on, but with one seam in each case compartment opened to admit the oil. To make draining easy the split seams should be on the same side of the meter preferably the outlet side. Fairly new diaphragms that have no leaks can be safely oiled without the additional cost of opening the meter. The heat of the oil around the drain rack (over the oil) causes complete draining to take place.

## Approval Policy Modified

**TO** insure that approved gas-burning equipment is kept abreast with modern standards, extension of American Gas Association approval has for some time been limited to a period of 5 years. In view of the present national emergency, it is felt that a temporary modification of the present policy is desirable. An extension of one year will be allowed in the case of equipment certification of which expires during the year 1942. Such extension is permissible provided that no changes have been made in applicable standards affecting safety since original approval was granted.

A large majority of requirements in effect January 1, 1942 involve extensive modifications from those in existence 5 years ago. Preliminary study indicates that most equipment on which approval expires in 1942 will require re-examination in order to permit certification after that time. A study of existing requirements for the purpose of segregating those involving safety features is now being made.

## Thierry Joins Public Relations Firm

**EDWARD M. THIERRY**, formerly assistant to the president of The North American Company, has joined the public relations firm of Hill and Knowlton, of New York and Cleveland. Mr. Thierry has been with North American for the last fourteen years and has specialized mainly in stockholder relations.

### Effortless Fuel

Gas equipment is taking the lead among modern heating systems since it is the only type which gives assurance to the home-owner that he'll have "nothing to clean, nothing to fill, nothing to empty, and nothing to spill."—*The Expanding Circle*

## Personnel Service

### SERVICES OFFERED

**House Heating Expert**—young married man thoroughly experienced in sales, engineering, and installations of gas heating and air conditioning systems, desires position—preferably with utility company. Has had 11 years' experience with the largest manufacturer of gas heating and air conditioning equipment and 3 years with utility company (37). 1434.

**As Salesmanager** salesman, purchasing agent, or factory representative. Twenty-three years' experience in practically every branch of the companies in greater New York. 1435.

**Industrial Engineer**, E.E. and M.E. Thirteen years in domestic, commercial and industrial sales, service, and utilization experience with a company having outstanding success in the sale of natural gas. Available now, married (38). 1436.

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